

Courtesy Explosive Engineer

• Issue Feature—Safety Fuse •

THE old spinning jenny or rope walk method of making safety fuse in vogue until 1860. The entire fuse was twisted, the spools and funnel remaining stationary after fuse was made in 60 foot lengths. It was then revolved and countered by a girl who carried spools of cotton yarn in a special rigging strapped to her waist.

CONNECTICUT INDUSTRY

AUGUST
1936

COAL

**BUNKER "C"
FUEL
OIL**

T.A.D. JONES & CO. INC.
NEW HAVEN

CONNECTICUT INDUSTRY

August . . 1936

VOLUME 14 NUMBER 8

L. M. BINGHAM, Editor

MANUFACTURERS' ASSOCIATION OF CONNECTICUT, INC.

Published monthly by the Manufacturers' Association of Connecticut, Inc., with executive offices at 50 Lewis Street, Hartford, Connecticut. Entered as second-class matter January 29, 1929, at the post office at Hartford, Connecticut, under the Act of March 3, 1879. As the official magazine of the Manufacturers' Association of Connecticut, Inc., it carries authoritative articles and notices concerning the Association activities. In all other respects the Association is not responsible for the contents and for the opinion of its writers. Subscription Rates: \$4.00 for 3 years; one year, \$1.50; 20¢ a copy. Subscribers should notify publisher promptly of changes in address. Advertising rates on application.

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LET US GUIDE RESTLESSNESS DOWN THE MIDDLE

By E. KENT HUBBARD

Restlessness is an outstanding trait of the American people. Coupled with independence of thought on Government and religious forms, it drove population wedges westward and southward from the New England and Southern Colonies, in two centuries, through more than three thousand miles of uncivilized wilderness. In the next half century it had linked its chief outposts, and many more yet unborn with the sinews of commerce, our railroads and highways. In the last fifty years since 1886, restlessness and individual initiative has created wonders in science that would amaze the most optimistic scientist of a century ago. Yet we continue to reach out for new fields to conquer in science, art, literature, and government.

But the restless urge that has built can also destroy, if improperly applied. That it has been improperly applied to government during the past three years is clear to the American business and to thousands more who realize that the "power to tax and control" as attempted and several times gained in recent legislation, must ultimately destroy all forms of independent thought and action, save by the governing few.

To those whose enthusiasm to do "something about our government" has run amuck in the toils of bureaucratic discipline, I should like to refer "The Effects of No Government" in the "land of sturdy habits" as observed by Colonel Barre, celebrated British parliamentary friend of the rights of America, as he traveled through this country before the Revolution. Nathan Daboll records his findings in "The New England Almanack" for 1839 as follows:

"Colonel Barre . . . paid a visit to the governor of Connecticut, of whom he made inquiries respecting the constitution of the country. His Excellency informed him that, literally speaking, there was no government whatever; that as to his power, he was a mere cypher; that the legislature met only to wrangle and do nothing; in a word it was mere anarchy and confusion, whenever any active step was to be taken; and that, upon the whole, the people generally governed themselves by every man doing as he pleased.

"The conversation changed; and the Colonel spoke of the face of the country; the improvements everywhere visible; and the universal appearance of plenty and happiness in the fields, dwellings and clothing of the people.

"The Governor assented and said he believed that there was hardly

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WHAT CONGRESS DID

MATTERS OF INTEREST TO INDUSTRY IN THE SECOND SESSION OF THE 74TH CONGRESS

Editor's Note. To give permanency to the record we have this year reviewed those phases of federal legislation of importance to industry in *Connecticut Industry* rather than by mimeographed or printed bulletins. While *Connecticut Industry* for July reviewed the "high spots" of the Second Session of the Seventy-Fourth Congress, time did not permit the preparation of the more exhaustive type of review which follows.

THE second session of the 74th Congress which adjourned on June 20 vied with the first in the number of bills considered and together with the first session, this 74th Congress outranked all others in the nation's history in its record of new philosophies in legislation and peacetime expenditures. Final action on many important measures was not reached until the closing hours of Congress. On request we shall be able to supply any one of the many acts which members may desire.

Like all predecessors among the New Deal sessions, the second session of the 74th Congress was noteworthy for the powers it vested in the President, for the extent to which it spread federal authority over "states' rights" and injected it into the nation's economic life; and for the prodigality of its spending of public money. It adjourned with the national debt at the all-time peak of \$33,779,000,000 (as of June 30, 1936) or \$6,500,000,000 above the peak World War indebtedness of \$26,500,000,000, and about double that of 1928. During the fiscal year of 1935-1936 the expenditures were \$8,447,000,000 as compared with income of \$4,116,000,000 leaving a deficit of \$4,361,000,000. By appropriating \$9,716,430,863 the second session brought the total appropriations for the 74th Congress to \$19,296,187,373. And the budget balance is not yet in sight under the present regime unless business and individuals are taxed far more heavily on larger incomes than at present.

With the close of the session—and the 74th Congress unless unforeseen developments seem to require a special session—industrialists can this year scarcely call the interim until January 5, 1937 (the date set by a resolution before adjournment instead of Sunday, January 3, as provided by the Lame Duck Amendment) a breathing spell because they must be constantly on the alert for executive orders permissible under the present legislation and for "ways and means" of thwarting further inroads of government into the realm of private business by the re-introduction of many industry control bills which died on June 20 (closing date of 74th Congress) and by many new ones being groomed for introduction. To assist in minimizing this heritage of worry, the Association will continue to keep its members advised of new developments of importance and to act for them whenever the need arises.

LABOR

Most important labor enactment was the **Walsh-Healey Government Contracts Act**, passed during the closing hours of Congress and signed by the President June 30, to compel adherence to certain labor standards in the performance of Government Contracts in excess of \$10,000. While the number of producers it will affect were materially decreased by insertion of the words "in excess of \$10,000" instead of \$2,000, as originally contained in the bill (narrowing scope of act due to extreme opposition of organized industry), the worst phase of the Act is that it was considered by its proponents as the cornerstone of another industrial plan, to have similar powers to the dead NRA in the event enough advocates of strict "business control" are returned to the next Congress.

Since the Secretary of Labor has the power of regulation under the Act and it is more important than the Act itself, your Association will follow the progress of regulation making with a view of being as helpful as possible within the scope of the law.

(For further reference see February, March, April, May, June, July issues of *CONNECTICUT INDUSTRY*, and General Bulletins Nos. 458, March 11, 1936; 463, March 18, 1936; 479, June 11, 1936; 480, June 22, 1936; 482, July 3, 1936 and 484, July 13, 1936.)

The **Strike Breaker Act** to forbid interstate transportation of persons to interfere with "peaceful picketing" was passed on June 19, under "suspension of rules" procedure, limiting debate to 40 minutes without permission to amend. Because of its vagueness certain analysts of the bill feel that it may impinge upon the employees' right to seek injunction when procedure involves the sending of counsel across state lines. (For further reference see July issue *CONNECTICUT INDUSTRY* and General Bulletin No. 480, June 22, 1936.)

The **Air Transport Labor Act** amends the Railway Labor Act of 1926 as amended, so as to apply all of its provisions except section 3 to common carriers by air and their employees and to every carrier by air mail. Among its several provisions, it transfers all air transport labor cases that may be pending before the National Labor Relations Board to the new set-up in the form of National Mediation Board. Labor bills which threatened but died in committee were: So-called **employee coercion bills** to prevent employers from influencing the votes of their employees; **30-hour week bills**; **O'Mahoney Industry Licensing Bill** to license all industry operating in interstate commerce requiring certain labor standards by all licensees; the **Ellenbogen Textile Control Bill**; the Connery resolution passed by the House but defeated by the Senate, to investigate the extent and effect of the use of labor saving devices put into operation since 1912. (For further reference see February, March, April and June issues of *CONNECTICUT INDUSTRY* and General Bulletin No. 448, January 27, 1936.)

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SAFETY FUSE

OR

THE STORY OF ENSIGN-BICKFORD

IN SIMSBURY, Connecticut, lies an essential key to progress in America; in fact without it the modern civilization which we accept with little thought of its foundations, would have been impossible. That key is the century-old Ensign-Bickford Company, originators and now chief makers of safety fuse in America. A statement so broad and meaningful must necessarily be qualified and expanded to be convincing. The qualifications can be included in a few sentences. Without gunpowder the mining of metals on any scale worthy of wide recognition would have been impossible. Without dynamite the progress of mining would have been so slow as to forbid the production of even 1% of the metals now mined in America and used in thousands of our modern tools, automobiles, household implements and other gadgets of utility. But without a safe method of igniting these mighty charges, gunpowder could never have been used to any appreciable extent in mining, and dynamite not at all. Thus safety fuse in the United States, first made in Simsbury in 1836, has become an essential link in modern progress by making it possible to carry on the large scale mining operations in the Americas to produce the millions of tons of raw metals that go into our modern products.

Both the historical background of explosives and the means of setting them off are pregnant with incidents of dramatic quality. Powder invention has been credited to Friar Roger Bacon (1214-1294) but it is believed that he used it only to create brilliant flashes and noise. In 1313 Berthold Schwartz is said to have made the first use of powder in firearms. And the first reasonably authentic employment of powder in mining was at the Royal Mines of Schemnitz, Hungary, by Kasper Weindl in 1627. Numerous other cards in the explosives game had been dealt before 1800 but none knew how they were to be played.

The first recorded use of powder in American coal mining was in 1818 when John Flannigan, a rock quarryman of Milford, Conn., was sent to Plymouth, Pa., to shoot down coal at the Smith Bros. mine. However, the high cost of powder and the desire for large coal combined to retard the use of powder and to retain the use of the pick and wedge in coal mining until about 1837, the year after safety fuse was introduced in America.

Cushioned shots, regarded as modern even today, were first used in European metal mining in 1802. Moses Shaw patented simultaneous electric shooting by the use of silver fulminate and gunpowder in 1830 but it was generally regarded then as a parlor trick rather than a practical method of igniting powder. The Leyden jar was also used by Robert Hare to ignite powder. But prior to 1831 there was no generally accepted practical method of igniting powder used in blasting operations save the following, all highly dangerous—igniting a trail or "train" of powder, inserted in goose quills, straw or paper twisted into tubing.

Millions of the goose quills imported from Ireland were used by miners in making the crude fuses of varying lengths. Cutting off the tubular parts of the quills the

miners would insert the small end of one into the larger end of another until the fuse chain was the required length. It was then filled with power, inserted into the powder charge, tamped and ignited by means of "torch" paper.

Such uncertain methods resulted in numerous accidents. At times the upper quill would slip out of the lower one and fire prematurely under the tamping bar. On other occasions the "torch" paper flame would be carried by a current of air to the top of the quill leaving no time for miners to escape. Varying conditions of moisture and the quality of powder were other factors which made for hazardous blasting.

Safety Fuse Invented

William Bickford, a leather merchant in the village of Tuckingmill, England, the County of Cornwall, had long deplored the tremendous loss of life due to the blasting operations in the tin mines. Many of his friends worked in them. Some of them had met death while others were injured. So with stern determination he set himself to the task of making a powder fuse which could be used with safety. He found by painstaking experiment that



Courtesy Explosive Engineer

FIRST continuous fuse making machine in which the jute yarn and cotton countering were revolved and the fuse drawn off without revolving.

all fuse materials then in use had inherent weaknesses which he could find no way to overcome. He enclosed the charge in a parchment bag and used a leather tube entering the neck of the bag as a fuse. Both he and his son-in-law, George Smith, a builder in Camborne, who built the wooden molds which shaped the bag, soon gave up the bag idea as impractical.

One day while pondering his problem (and it was with him day and night) he visited a rope maker in Tucking-



THE Ensign-Bickford plant at Avon, Connecticut.

mill. He noticed as the man walked up and down how the hemp carried around his waist was spun into yarn for the making of rope. Suddenly it occurred to him that if a funnel filled with fine powder could be so fixed as to pour a stream of powder into the yarn as it was spun, and if these strands could be securely fastened and waterproofed, it would provide a slow burning fuse.

His inspiration proving fundamentally sound, William Bickford succeeded in obtaining a Royal patent for what he termed his "Miners Safety Fuse," and thus it came about that the ancient contrivance known as the rope-walk became the cradle of a new industry.

Requiring mechanical assistance to produce the new fuse, Mr. Bickford found it in Thomas Davey, a mining engineer with a flair for mechanical contrivances. Together these two men completed the first lengths of safety fuse in 1831. Thereafter a partnership was formed with Mr. Bickford's son, John Solomon Bickford, his son-in-law, George Smith and Mr. Davey as partners of the inventor, the firm being known as Bickford, Smith and Davey. A quotation from the patent describes the nature of the fuse and lays down the basic principles for its manufacture which remain unchanged in essence today, although many improvements have been made in the quality of the materials and in the control of their application to fuse to produce a uniform burning product under varying field conditions. The quotation from the patent, illuminating in its description of the process, follows:

"The instrument invented by me for igniting gunpowder when used in the operation of blasting of rocks and in mining, which I call 'the miner's safety fuse,' I manufacture by the aid of machinery and otherwise of flax, hemp, or cotton, or any other suitable materials spun, twisted, and countered, and otherwise treated in the manner of twine spinning and cord making, and by the several operations hereinafter, and in and by the Drawings hereunto annexed, mentioned, and described, by means whereof I embrace in the centre of my fuze, in a continuous line throughout its whole length a small portion or compressed cylinder, or rod of gunpowder, or other proper combustible matter prepared in the usual pyrotechnical manner of firework for the discharging of ordnance, and which fuze so prepared I afterwards more effectually secure and defend by a covering of strong twine made of similar material, and wound thereon at nearly right angles to the former twist by the operation which I call countering,

herein-after described, and I than immerse them in a bath of heated varnish, and add to them afterwards, a coat of whiting, bran, or other suitable powdery substance to prevent them from sticking together, or to the fingers of those who handle them; and I thereby also defend them from wet or moisture or other deterioration, and I cut off the same fuze in such lengths as occasion may require for use. Each of these lengths constituting, when so cut off, a fuze for blasting of rocks and mining, and I use them either under water or on land, in quarries of stone and mines for detaching portions of rocks, or stone, or mine, as occasions require, in the manner long practiced by and well known to miners and blasters of rocks."

Early Developments

Like many other innovations which have been boons to mankind, stupidity and selfishness dogged the early efforts of Bickford, Smith and Davey to secure widespread use of their miner's safety fuse. Although William Bickford was stricken with a paralytic stroke in 1832 he lived to see his invention receive widespread acceptance and acclaim. There are records in existence today which give testimony of Cornish doctors who stated that the safety fuse had decreased blasting accidents in West Cornwall by 90%. Another subtle comment by General Pasley, Chief of Ordnance for Great Britain, showed how it was eventually received in influential government circles. Said he, "Here I have been trying to scheme a safe and simple means of conveying fire to the blasting charge and never thought of trying to make black powder burn slowly and regularly, which a Cornish man has discovered in a damned rope-walk."

Since hardy seeds of progress seem destined to light eventually in the most fertile soil, it was inevitable that



Courtesy Explosive Engineer

THE burning test applied to every lot of fuse manufactured at The Ensign-Bickford Co.

safety fuse should be introduced in America when starting on its most colorful century of development. From the early colonial days the Copper Hill mine in the northeastern part of Simsbury was operated intermittently until the Revolutionary War when it was used as a prison and later taken over as a state jail. However, in 1830, a group of New York capitalists organized the Phoenix

Mining Company, took over the prison property, and engaged Richard Bacon of Simsbury as superintendent. Having heard of the development of safety fuse, Mr. Bacon decided, in the interests of his copper mining venture, to make connections with the English firm of Bickford, Smith and Davey and import fuse into the United States. Importations were started after Mr. Bacon had called on the English firm of fuse makers and had been appointed as its American agent. Because of the 25% duty on the fuse and the necessary sales expense, the retail price was so high that further shipments seemed impracticable about 1836. It was then decided to manufacture the fuse in America, and the firm of Bacon, Bickford, Eales and Company was formed. The first fuse was manufactured in the United States on machinery sent from England under the supervision of Joseph Eales who came to this country for the purpose.

The machinery was simple, being a spinning bench with traveling "jennies" which drew and twisted the yarn. Powder was fed to the center of the twisting strands and the resulting fuse lengths were afterwards "countered" and coated with water-proofing compounds.

The elaborate articles of copartnership which were drawn up on a four page parchment and which brought into being Bacon, Bickford, Eales and Company January 1, 1837, are still in the possession of The Ensign-Bickford Company. The simple machinery just mentioned was erected on a water power site in East Weatogue, about a mile and one-half from the present site. Although tradition has long persisted that the first safety fuse was produced at the old Simsbury copper mine, it is an established fact that the first factory for producing the fuse was on land adjoining the farm of Richard Bacon in East Weatogue.

Within a short time after the new enterprise was launched the panic conditions, starting in 1837, forced the mine to shut down. (It was never a financial success during its many intermittent openings from the first in 1707.) Mr. Bacon then gave his full attention to the development of markets for the new business in the small iron and copper mines in the eastern states, in the coal mines of Pennsylvania, then being heavily exploited and in the many quarrying and related industries.

The English company decided in 1839 to send to America as its representative, one of its bookkeepers, Joseph Toy. So interested did he become in the work and so attached to the country that he never returned to England, but became an American citizen, establishing an industry on a firm foundation with which he, and later his family, have been actively identified for nearly a century. It was his vision, integrity and ambition which guided the embryo business through the maze of difficulties which at times seemed almost insurmountable. It was he who created the enduring ideals that shaped its destinies after he was gone.

During the first twelve years of bitter struggle against price-cutting competition, whose only interest was to sell fuse regardless of quality at a price, Mr. Toy had gained one-seventh interest in the business from Joseph Eales who had retired. Then fate doled out another bitter potion but one destined to give Mr. Toy and his family succeeding him a great opportunity. A devastating fire wiped out the main factory on March 15, 1851, leaving only the

water wheel. It was Mr. Toy's darkest hour. Exhausted, scorched, almost blinded by the smoke and almost ready to give up from discouragement, he wrote a postscript to a letter already penned to his English partners as follows:

"Our main factory has this day been consumed by fire—everything is consumed but the wheel—all our books and papers are gone—what a misfortune!"

The fire, which brought to a climax all of the other discouragements of the previous years of painfully slow growth in which constant danger combined with stupidity, selfishness and conniving competitors, caused Mr. Bacon to retire from the hazardous and uncertain business. Left alone, Mr. Toy was tempted to do likewise but his indomitable pioneer courage spurred him on to build anew from the ground up. The new establishment—Toy, Bickford and Company—came into being in May, 1851, and a factory was built on the present site of The Ensign-Bickford Company at Hop Brook, Simsbury.

The first fuse was sent to Boston on June 14 and by the middle of July, Mr. Toy was able to report to his English partners that things were "progressing well—new concern sold fuse to end of June about \$3500. By dint of management we have names of nearly all our old customers on our new books. My handwriting has done more than ten traveling agents could do."

But since there always have been those ready to capitalize on the disasters of others, a rival fuse firm had started up during the lull in the activities while the new plant was being rebuilt. But even this competition and that later produced by the sons of Richard Bacon failed to stop the advance of Toy, Bickford and Company. To partially offset the competition the English partners sent over new machinery for the making of fuse in continuous lengths instead of in the old 60 foot pieces. This development of the continuous fuse making machine marked an important turning point in the technique of fuse manufacture and made possible the economical production of a dependable product on a widespread scale. These improved processes caused the Bacon group to fall by the wayside and the Fuller group (the other competitor) to sell out to Toy, Bickford and Company in 1859.

The sun was again shining on the business, but not for long, since the factory took fire on the morning of December 20, 1859, burning to the ground with eight women losing their lives, while four others were seriously injured. Always a forward looking institution, Toy, Bickford and Company plants were rebuilt better than before.

Through the years from 1837 through the 1870's growing America was expanding in every direction, always

THE Ensign-Bickford plant at Simsbury, Connecticut. This plant, together with the Avon plant, comprise 67 buildings with a total of forty-two acres.



demanding greater industrial production. Railways were laying millions of tons of steel and blasting new highways to cities yet unborn. Vast ore deposits had to be opened rapidly from which came the raw materials for the rails. Gold mining grew into an important industry from the late 1840's. New canals were being built and others en-



BOARD of directors. Standing, L. to R.: Robert E. Darling, Sec.; John E. Ellsworth, Treas. Sitting, L. to R.: J. Kell Brandon, Vice Pres.; Robert Darling, Vice Chairman; Joseph R. Ensign, Chairman; Henry E. Ellsworth, President; Chester R. Seymour, Vice Pres.

larged. And all of these operations required the use of more and more safety fuse, produced despite the great dangers of explosion and fire in ever greater quantities. But from the four disastrous fires which followed the first one in 1851, valuable information was gained to the end that fire prevention methods were developed to minimize the greatest hazard in the industry.

In this "rough and ready" era of conquest over nature competition was a hard-riding, hard-driving struggle for business—not the present day get-together variety with round tables and overstuffed chairs. Farmers who had worked for Toy, Bickford and Company thought they could make fuse just as good as the company in their barns. As put in the company's recently published pamphlet—100 years—"it was a question of first come, first served—you got the order when you delivered the goods. Price wars were frequent and many firms fell by the wayside who thought only of the moment and not of the future. But it was characteristic of Joseph Toy to see beyond the minute, to realize that his was a sacred trust—safety fuse must ever be dependable."

Had Mr. Toy's only son, Joseph Jr., lived he would have doubtless succeeded his indomitable pioneer father as the head of the business, but fever snuffed out his life while serving with the Union forces in 1862. Instead Ralph H. Ensign, who had married Mr. Toy's daughter Susan, came into the company as assistant to Joseph Toy. He proved to be a man of rare ability. He had a logical mind, keen perception and the courage to make far reaching decisions when called upon as he piloted the company in the trying days after the Civil War through the "80's and 90's" and in the new era of big business which came after the turn of the century.

Shortly after Mr. Ensign came with the company lode mining in California began to assume greater importance, as placer mining waned. Shipments of fuse to California from the East were subject to delays and damage in transit. The cost of transportation was high, and the price of fuse

was almost prohibitive to the consumer. With this state of affairs playing to their advantage, other men started fuse factories in California. To hold its business against the new competitors, Toy, Bickford and Co., thought it wise to establish a branch factory there. Accordingly in March, 1867, Lemuel S. Ellsworth who had married Mr. Toy's daughter, Ann, was sent to California to establish a factory. A letter sent to Toy, Bickford and Company by the English partners at this time gives a clue to the policies which have shaped the destinies of the American fuse industry. We quote from it as follows:

"We are, however, assured of one important fact—that the superior quality of the fuse is your sheet anchor. Make the best article in the cheapest manner and you may defy opposition. Our fuse through the whole of this country has the preference over that of all other makers . . . We shall feel concerned to know the progress of this new branch and wish it all success. We remain,

Yours very truly,
Bickford, Smith and Davey."

In Simsbury, the affairs of Toy, Bickford and Company were progressing famously under the guidance of Ralph H. Ensign, and later after 1878, with the aid of Charles Edson Curtiss, another son-in-law of Mr. Joseph Toy, who had married his daughter Jeanette. When Mr. Toy died in 1887, Ralph Hart Ensign became managing partner and the name of changed to Ensign-Bickford & Company.

About the same time, Lemuel S. Ellsworth, who had organized and managed the California plant returned to reenter the company, leaving the management of the Western branch in the hands of James B. Merritt, step-



SAFETY fuse and accessories. The company also produces a separate line of accessories for use with Cordeau-Bickford detonating fuse.

son of Mr. Toy. Sometime afterward the California plant became a part of the Coast Mfg. & Supply Co., an independent corporation, still managed today by the descendants of Mr. Toy's step-son, James Merritt.

During the early years competitive fuse had been manufactured at Avon, Connecticut. That competitor became a truly worthy one after H. S. Chapman of the Metallic Cap Company purchased the Avon fuse business in 1879, and began to produce a quality product. Out of mutual respect between two men, both striving toward the same end, grew a friendship between H. S. Chapman and R. H. Ensign, which in 1907 resulted in the consolidation of the two companies, under its present incorporated name of The Ensign-Bickford Company.

Time marches on to 1913. Then came the introduction into America of Cordeau-Bickford Detonating Fuse—a lead tube filled with TNT. Burning at the rate of 17,000 feet per second, this fuse was practically instantaneous permitting its widespread use for the simultaneous firing of many shots. It found special favor in the deep-well type of blasting such as is used in quarries and in making cuts through rocky hills and mountains. The invention of Louis L'Heure, Rouen, France, and patented in the U. S. in 1907, the fuse was obtained for America through connections with Davey, Bickford, Smith and Company, fuse manufacturers of Rouen, France.

Millions of feet of safety fuse were used in blasting operations during the building of the Panama Canal, and during the World War tremendous quantities of special fuse was furnished for hand grenades, misfire charges, and other special uses. So perfect were these wartime products that the company received a citation from the War Department for the excellence of services rendered.

After the death of Ralph Ensign, his son, Joseph Ralph Ensign, became president. Being a thorough believer in the rigid principles and process control policies of his father, he at once set about strengthening and broadening them in order to take full advantage of the benefits they presented. His management, falling within the period of great industrial consolidation, Joseph Ensign and his associates had the heavy responsibility of strengthening the organization to cope with the many problems of rapid expansion. To his everlasting credit he guided the fortunes of the company safely through these times without losing sight of fundamental principles or sacrificing standards of business conduct or quality of product. Within this period new facilities were provided in the sales, service, technical, engineering, production and research departments.

More recently the company has acquired an interest in the Canadian Safety Fuse Company at Brownsburg, Province of Quebec. With Cia Mexicana de Explosivos, S. A., the Ensign-Bickford Company formed in 1934 Cia Mexicana de Mecha para Minas, S. A., which constructed a factory at Dinamita, Mexico, to manufacture safety fuse for the Mexican trade. Today the company's two largest competitors are Coast Mfg. & Supply Company and National Fuse and Powder Company. The former, as previously mentioned, was originally established as a branch of Toy, Bickford & Company by Lemuel S. Ellsworth, father of the present head of The Ensign-Bickford Company, Henry E. Ellsworth and grandfather of its treasurer, John E. Ellsworth.

Although unchanged in fundamental design for more than 100 years, safety fuse has been constantly improved to enlarge its scope of usefulness during the greatest century

of progress in the history of the world. Without this product, "timed for 100 years," and proved basically sound, America as we know it could not possibly exist; with its vast network of railroads and highways passing through, and carved out of hills and mountains; with its millions of developed horsepower and more millions of automobiles, telephones and radios; with its manufacturing plant capacity capable of producing more than the remainder of the world combined; with its people enjoying a standard of living far beyond that of any other nation.

Stark tragedy aroused the need for safety fuse. The relentless determination and the intelligent labors of William Bickford found the way. And old industry gave the new industry its first opportunity in America. There four generations of fuse makers built slowly but surely, a constantly improved product in plants that grew in number and efficiency with the passing years. Uniform dependability of product was the foundation rock upon which Joseph Toy of the first generation built. Though flush with opportunity, prudently grasped by each new generation, never once has the changing management of The Ensign-Bickford Company veered from this rock of safety and dependability. Diligent research, exacting standards, exhaustive tasks; these three were the sound and practical triumvirate which have made Ensign-Bickford safety fuse the outstanding product in its field on the North American continent. These have likewise brought bountiful rewards to their makers, users, and to the millions who are now enjoying, without thought of their benefactor, the fruits of our modern American mode of life.

The present management of the Ensign-Bickford Company consists of Joseph R. Ensign, chairman of the Board; Robert Darling, vice chairman of the board; Henry E. Ellsworth, president; J. Kell Brandon, vice president; Chester R. Seymour, vice president; Robert E. Darling, secretary; John E. Ellsworth, treasurer.

Products and Sales Method

Besides all types and lengths of safety fuse and Cordeau-Bickford detonating fuse, the company has also developed a complete line of fuse accessories which experience has shown increase fuse efficiency and lessen the hazard of operators. These accessories include several types of lighters, cap crimper and blasting tool, cartridge center punch and bench cutter—all practically indispensable to operators who would go the ultimate toward "safety first." In recent years the marketing of these products has been done through explosive manufacturers.

Centennial Celebration

To do just honor to the founding of the safety fuse industry in America, 100 years ago, The Ensign-Bickford Company staged a celebration, unique in the annals of industry from May 23 to 28. In reality it was a social gathering of the chief fuse makers of the world, all closely connected by blood or through close business relationships, in combination with fitting acknowledgment to the English and American pioneer fuse makers and to the present employees of the company. The chief features follow.

On Tuesday, May 25, a pageant was staged in East Wadsworth depicting the arrival of Joseph Toy, the breakdown of the vehicle while the Toys were descending Talcott Mountain, the remainder of their journey on foot and their

(Continued on page 17)

WHAT CONGRESS DID

(Continued from page 2)

RELIEF

The RFC Disaster Loan Act approved April 17, 1936, amends the Act of April 13, 1934, so as to empower the RFC to make direct loans for the purpose of financing construction or reconstruction incident to flood, fire, tornado or earthquake damage up to \$50,000,000. It also permitted the National Housing Administration to insure such loans made by financial institutions up to 10% of the total amount of such loans. **The Deficiency Relief Appropriations Act*** appropriated \$2,375,281,000 to supply deficiencies in certain appropriations for the fiscal year 1936 and supplemental appropriations for both 1936 and 1937. (*For further reference see June issue CONNECTICUT INDUSTRY.)

CORPORATIONS

The Securities and Exchange Act of 1934 was amended by S. 4023, now Public Law No. 621, when the President signed the bill May 27, 1936. The amendments provide for the continuation of the privilege of trading unlisted securities on the national exchanges, for the regulation of "over the counter" brokers and dealers, and for the filing of continuing reports by persons filing registration statements for new securities under the **Securities Act of 1933**. Additional reports need not be filed (1) if new security is listed and registered on a national exchange (2) if issue is already required to furnish equivalent reports (3) if the aggregate value of the outstanding securities of the same class is less than \$1,000,000.

The Bankruptcy Laws were amended, but only as pertaining to municipalities, (only as affecting drainage) removing the requirement that 30% of the creditors must consent to the filing of the petition in the Federal Court in the event loans have been authorized by an agency of the government for reduction of indebtedness. Amendment requires consent of only 51% of such bondholders as requisite to confirmation of plan of reorganization. Previous law required consent of 66-2/3%.

TAXATION

The Revenue Act of 1936 was finally passed after months of discussion June 20, in the closing hours of the Congress. It was signed by the President the following week and an explanatory digest of it was subsequently mailed to members. It altered the graduated rates of normal tax now imposed on net income of corporations and imposed new surtaxes at graduated rates on "undistributed net income" of corporations. Tabulation of new corporation taxes was contained in Taxation bulletin No. 115 sent to members June 26, 1936. Details were explained in the **Digest**.

A bill, H. R. 11365, which became effective April 10, made filing of duplicate income tax return slips mandatory and carried penalties of \$10 for failure to file by corporations and \$5 for individuals. (For further reference see Tax Bulletins No. 112, April 28, 1936; No. 113, May 4, 1936; and No. 115, June 26, 1936.)

MONEY, CREDIT AND BANKING

The National Housing Act Amendment, approved April 3, extended until April 1, 1937 the operation of Title I of the National Housing Act and amended Section 2 of that Act lowering amount of insurance permitted on real property loans from 20% to 10% of total amount, setting maximum insurance liability at \$100,000,000. The amendment also repealed Section 3 of Title I of the National Housing Act.

The RFC Disaster Loan Act, passed April 18, was mentioned under sub-heading "Relief." **The Bonus Act** making the World War adjusted service certificates due and payable, passed over the President's veto in January, provided for pay-off of full amount of face value of certificates, less loans outstanding, by the issuance of 9 year 3% interest bearing bonds in denominations of \$50 or multiples thereof with residue payable in the regular manner, and further authorized an appropriation sufficient to cash the bonds as provided under the Act. (For further reference see February issue of CONNECTICUT INDUSTRY.)

TRANSPORTATION AND COMMUNICATION

During the first session of the 74th Congress, certain important transportation legislation was enacted, including the **Motor Carrier Act, 1935***, and the **Compulsory Railroad Retirement System and Pensions Act** (recently found unconstitutional). The Second Session passed a **Ship Subsidy Act***, H. R. 8555, which provides for turning over to the new Maritime Commission the regulatory duties of the Shipping Board Bureau. In two years these duties may be transferred by the President to the Interstate Commerce Commission. Coercive measures on the part of common carriers, intended to prevent other such carriers from serving outports at the same rates applicable at the nearest port regularly served, are outlawed. Two measures were enacted relating to water commerce; the so-called **Hague Rules Act, S. 1152**, makes it possible for the steamship lines to achieve uniformity in ocean bills of lading; the **Shipping Act of 1916** was amended by adding a **False Billing section, S. 3467**, similar to that applicable to common carriers by land. A number of bills were actively considered but not enacted. These include the **Pettengill Fourth Section Bill, H. R. 3263**, which proposed to eliminate the long and short haul clause. The railroad labor bills were favorably reported by the Senate Interstate Commerce Committee, but were never brought up in the House. These include: S. 1288, to require **railroad signal inspection**; S. 2511 providing for **inspection of railroad train dispatching offices**; S. 543, requiring **railroad track and bridge inspection**; and S. 1562, to **limit the hours of service to twelve hours**. Hearings were held on S. 4174 for **Dismissal Compensation** to railroad employees affected by consolidation or abandonment of carrier facilities. However, an agreement between the carriers and their employees rendered this legislation unnecessary. Bills seeking to extend the term of the **Federal Coordinator of Transportation** for various periods ranging from three years to ninety days failed of passage. Certain measures proposed by the Coordinator, but not considered in this session, included the **Water Carrier Bill, Reorganization of the Commission, and Regulation of Wharfingers**. No effort was made to secure the passage of S. 4055, a bill to **outlaw the Basing Point Principle** in quoting prices.

(Continued on page 18)

THE AMERICAN METHOD OF PREPAREDNESS

By MAJOR R. F. V. STANTON and CAPTAIN W. A. DOWER

Being a radio skit presented at the Annual Meeting of the Hartford Ordnance District, held May 21, Hotel Bond

PREFACE

FROM time to time, it is useful to remind oneself that the burden of modern war is not carried by armies alone but by every citizen and resource of a nation. Manpower is used not only in combat but is equally necessary in producing munitions and in maintaining the health and morale of the non-combatant population. Manufacturing capacity has its duty to perform and must be used intelligently and equitably.

Manufacturers who were engaged in the World War often comment that there is real necessity for spreading out the load so as to interrupt peace time activity as little as possible.

For the maximum war effort, the entire manufacturing capacity of the country will be needed either directly in munitions manufacture or in allied war activity. The problem is to keep each business as close to its normal activity as possible.

Thus it is incumbent upon each manufacturer to find his role in the war program and to accept participation as his part in a common duty.

Needless to say that the easiest in the long run and the most efficient participation in the preparedness program involves an early start in finding out one's responsibility connected therewith.

The playlet which follows indicates some of the practical values involved and don't forget . . . **The next war will surely call for your help!**

Why not assist in making the burden as light as possible and in making the return to normalcy thereafter quick and easy?—Lieut. Col. F. H. Miles, Jr., Executive, Hartford Ordnance District.

* * *

Announcer:

GENTLEMEN of the unseen audience: As you gather tonight to review the year's progress in industrial preparedness for a military emergency, the peace of the world is faced by serious threats. To find breathing space for their teeming populations, rulers are indulging ambitions for the conquest of territory. Rich deposits of natural resources on the Continent and in the East incite the greed of neighboring nationals. Stores of monetary metal in the coffers of gold-standard countries draw the lustful glances of less fortunate governments. Dominion of the high seas, with their access to far-flung markets, inspires the laying of commercial keels that may one day feel the vibration of heavy guns on the upper decks. In mid-Europe, a vast domain experiments with a new type of social economy which can succeed, in the

minds of its ardent partisans, only if its operations are extended beyond the confines of their own jurisdiction. In the Western Hemisphere, from the Rio Grande to Cape Horn, the descendants of swarthy Iberians mill about in restless discontent. In the Far East, ancient peoples have felt the heel of the subjugator. All over the globe the impending storms threaten. Closer and closer to our shores come the dread clouds of fear and strife.

Announcer:

Rome, Italy. The Prime Minister of the peninsular kingdom, fresh from the conquest of new African dominions, gives the tidings to assembled multitudes from the public square.

Mussolini:

La guerra è finita e tutta l'Etiopia è italiana. Ho mantenuto la promessa fatta il 2 Ottobre scorso che il conflitto non si sarebbe esteso in Europa. Le molteplici razze dell'ex impero del Leone di Giuda hanno dimostrato di voler vivere e lavorare tranquillamente all'ombra del tricolore d'Italia. Difenderemo la vittoria con la stessa fermezza con cui l'abbiamo ottenuta.

Announcer:

Berlin, Germany. Der Fuehrer proclaims the symbolic reoccupation of the Rhineland.

Adolph Hitler:

Das Bündnis Frankreichs mit Soviet Russland müssen wir als eine Verletzung des Locarno-Vertrags betrachten und zum Schutz unserer Grenze werden unsere Truppen heute das Rheinland wieder besetzen.

Announcer:

London, England. Sir Anthony Eden, in the House of Commons, expresses an attitude of profound discouragement with the accomplishments of the League of Nations in the preservation of peace.

Sir Anthony Eden:

The situation we and every other country which is a member of the League have to face today is both difficult and disappointing. It is only by facing the facts that we can deal with this matter. We have to face the fact that we have got to admit the failure of the League. We have naturally got to admit that the action of the League has neither stopped the outbreak of war nor arrested it once it was begun. At the most it has made the prosecution of the war more difficult and costly.

Announcer:

Washington, D. C. Meantime, our country's defense forces are not being neglected. Disappointed with the failure of the pacts on naval limitations, the United States Navy Department proceeds with the construction of naval facilities, the revamping of obsolete tonnage, and the recruiting of personnel, enlisted and commissioned. Recognizing the relationship of a sound merchant marine as the first ally of the navy line, our Government has encouraged the laying of keels for more ships to ply the commercial lanes, with the two modern liners which now proudly carry the Stars and Stripes across the North Atlantic. The new appropriation for the War Department is of a size which will enable something near adequate training of a future army. But where are these trained forces to obtain the necessary implements of war if we are overtaken by an aggressor? The Government arsenals manufacture military rifles, pistols, machine guns and cannons, and our people are lulled into a sense of security when they observe the physical proportions of some of these institutions. Unfortunately, these gigantic establishments cannot produce over 5% of the nation's arms requirements in time of war. This fact, established by actual World War experience, led to the plans adopted in the National Defense Act of 1920 which contemplates industrial preparedness planning by commercial establishments under the supervision of the Ordnance Department of the United States Army. When war is declared, these factories are supposed to have plans ready to start production of assigned orders for special war implements. In peace time, these factories are visited by accredited Ordnance Department representatives, who inspect the progress of the industrial preparedness planning. All of this work is done on a voluntary basis, without compensation to either party and at no cost to the taxpayer. The responsibility lies with an office created for that special purpose by the National Defense Act of 1920 and within the limitations of the facilities which Congress has placed at their disposal these several incumbents of that office in the last fifteen years have made notable strides.

The voluntary response by manufacturing concerns has been nearly universal, with the result that preparedness work is approaching a creditable state of efficiency and completion. In a few isolated instances, executives have not recognized the gravity of the problem. Let's listen in at the office of a manufacturer on whom the War Department is relying for an important contribution to its Ordnance needs in the next emergency. We find the chief executive in conference with an Ordnance officer. As the scene opens, they are discussing the annual check-up of his factory plans.

Mr. Martin:

Well, Captain, I suppose you're around again to find out the status of that war stuff I told you we'd furnish, that—what d'ye call it—DPO?

Captain Hall:

Yes, Mr. Martin, DPO. That means District Procurement Order number so and so. You see, it isn't quite a contract—

Mr. Martin:

You're damn right it isn't a contract! I don't pretend to know a whole lot about the proposition—wait a minute, I'll send for my "super". Oh Miss Coffey, ask Mr. Collins to come up here please. As I was saying, I don't know a

whole lot about it, but I *do* know that until you fellows straighten out the little matter of how a manufacturer will get paid for his goods, you're a long way from a contract.

Captain Hall:

That's a reasonable criticism, Mr. Martin. No one realizes it better than the Ordnance officers. All I can say in extenuation is that the drafting of such a complicated document as the adjusted compensation contract is no overnight job. We've been at it now for several years and I think we're getting somewhere. But I'm still after that factory plan.

Mr. Martin:

Yeah, that's what I thought. But I'll tell you right now, we've been too busy to do anything about it this year. I don't know what line you're in in civilian life, but if you were in this business you'd know what we've been up against in competition. We've had to pare costs to the bone. That means getting along with a shorthanded staff and believe me that staff has been busy enough trying to run this business on the right side of the ledger, without putting any time in on stuff like this.

Captain Hall:

I think we can appreciate all the extra work that this preparedness program involves. But we simply have to count resources closely in this district, because nearly every plant has something assigned for an emergency and there are still more contracts to be placed. Four years ago you accepted this large schedule for inspection gauges with the general statement that you could handle the order satisfactorily. Now, the making of this factory plan will give the Ordnance Department concrete evidence that you can, and will, handle the contract. If you were negotiating a large commercial contract and the prospect was a little fussy about deliveries, you'd doubtless offer him some statement regarding your number of machines, employees available, and weekly rate of production, to convince him that you were in a position to execute the order on time.

Mr. Martin:

It's all very fine, but why worry about it now? We aren't going to have another war, and I've got a heavy golf date—but here's my superintendent and you can go over it with him. Collins, this is Captain Hall. I wish you'd get those War Department prints in the back vault and see if you can answer his questions for an hour or so.

Captain Hall:

One more question before you go, Mr. Martin—are you planning on coming to the Annual District Meeting on May 21?

Mr. Martin:

I can't be bothered with it. It gets pretty tiresome listening to a lot of dry talk about some charts that can't be seen ten feet away, and a lot of rehash about theoretical wars. If you had some entertainers perhaps it wouldn't seem so much like a night wasted, but the last one I went to was a flop. Well, I'm going. Collins will fix you up. See you again sometime.

Captain Hall:

Good day, Mr. Martin. (Door slams.)

It's pretty discouraging to us, Mr. Collins, to run into the attitude that the United States will never engage in another war, because that's the mental condition that leads

the country to neglect the most vital insurance to a nation's safety—an adequate supply of war materials that are not regularly produced as commercial articles.

Mr. Collins:

Yes, I don't see how people can be so complacent about it, with the things that are happening all over the world today. But I find it harder to understand where people get the notion that, even if there were another war, the arms and ammunition could be supplied out of Government arsenals.

Captain Hall:

Anybody who believes that just doesn't know the facts. Of course the arsenals look big and the taxpayers know they have to shell out money to keep them going, but actually they couldn't produce 5% of the nation's requirements in time of war. Actual experience in the last war showed that. And it was that lesson which led to the adoption of the National Defense Act of 1920. Under that scheme, factories are supposed to have plans ready to start production of assigned orders when war is declared. Naturally, these factories have to be visited by accredited Ordnance Department representatives who inspect the progress of the industrial preparedness planning. That's just what I'm here for today. All of this work is on a voluntary basis. I get nothing out of it and neither do you, and it doesn't cost the taxpayer a nickel. The manufacturers as a general thing have been remarkably cooperative, in spite of the fact that some of them weren't treated so well after the last war.

Mr. Collins:

Well, I think I am one of those who appreciate what you're doing. I know it will cost us money, but when I think of the chaos we went through here in the last war, what with plans made overnight, designs changing every five minutes, the red tape of dealing directly with Washington, and all that stuff, I think the new scheme is a definite advantage in the long run, not only to the country as a whole, but even to the manufacturers. There are two things I like about it especially. One is that we'll have a pretty definite idea just what we're going to be asked to do. The other is that we're going to be dealing with a group of trained men who talk our language and not a few upstarts who got commissions overnight and then acted as though they knew more about our own business than we did.

Captain Hall:

If that's a compliment for the Commissioned staff of the Ordnance District, I'll stand up and take a bow. But I think you're right. We in the Reserve have a pretty definite idea of what we're doing, and we're picked from posts in civil life that give us the experience and the background to deal with you on the plane of your own experience. But to get back to your factory plan, there is one thing you can do in an hour and that is to tell me if all of this order can be manufactured with your existing plant and equipment. Have you ever studied this contract?

Mr. Collins:

Yes, and more than the chief realizes, I guess. He has a habit of laying things like this aside until some time later. Then suddenly he gets interested and gives me hell because I don't know all the answers right off the bat. I'll get the data and the prints. I've got plenty of questions to go over with you.

Announcer:

The scene changes to the nineteenth hole of the Rocky River Golf Club. John T. Leland, the president of the Leland Arms Company and Mr. Martin have just finished their showers. Mr. Leland, standing in front of the mirror adjusting his tie, addresses Mr. Martin who sits pulling on a shoe.

Mr. Leland:

What a swell golf partner you turned out to be. You were twenty minutes late teeing off and about twenty strokes to the bad. Who twisted your tail today?

Mr. Martin:

Everything was all right until just as I was about to leave the office. Then a young squirt of an Ordnance Captain came in and wanted to know why I didn't have my so-called factory plans ready for a war emergency. I've been upset ever since. Those charts and their theoretical wars! If we didn't have any armies, there wouldn't be any wars.

Mr. Leland:

The trouble is that the United States practically has no army now, when you compare it with some of the European countries. Over here they have a little different theory of preparedness. Instead of a huge standing army and a large store of war supplies, the idea here is to create the skeleton of a reserve army, and then figure out a way to supply it with arms overnight.

Mr. Martin:

Are you mixed up in this preparedness business too?

Mr. Leland:

Oh sure! I've been through all that factory plan business, and ours are right up to the minute.

Mr. Martin:

They would be. You're selling firearms to the Government now.

Mr. Leland:

We are making a large caliber revolver for the Government now, but that isn't 10% of our capacity. The rest of our business is mostly small caliber target pistols. If war came on, of course, we'd have to stop production on those, just as you'd probably have to stop production on your commercial gauge business, and go into war work.

Mr. Martin:

I hadn't given that much thought, but I suppose it's true. I have had a big bunch of prints tucked away in the safe for four years and the Ordnance crowd have been pestering me for a factory plan. I suppose I ought to play ball.

Mr. Leland:

That's the way we feel about it.

Mr. Martin:

How much time do you give to the thing anyway?

Mr. Leland:

We've developed our plans for over eleven years. We have a committee of five and they spend a day every month, and sometimes more in reviewing the plans. Tomorrow we've got a date with the Ordnance officers for the annual check-up. Why don't you come over and listen in?

Mr. Martin:

Fair enough. Nobody ever said I wasn't willing to learn and that'd be an easier way of getting the general idea

than going up to that dry meeting they pull off once a year.

Announcer:

The scene changes to Martin's office as he returns. Collins, the superintendent, and Captain Hall are still in conversation at the desk. (Door slams.)

Mr. Martin:

What! Are you two still here? I thought you were going to give him an hour Collins, and let it go at that.

Mr. Collins:

Oh, we got interested, and we were trying to get some information ready for you.

Captain Hall:

You see, we found that on one item alone you need thirty thread grinding machines more than you now have.

Mr. Martin:

That's easy. I can buy them if they're really needed.

Captain Hall:

Did you send in a reservation for them on your 1936 machine tool report to the Ordnance office?

Mr. Martin:

Of course not, why should I? I buy my own thread grinders, they don't.

Captain Hall:

Of course you do, but I wonder if you stop to think that in other corporations this emergency planning has gone so far that procurement orders for new machinery have been placed in the 1936 machine tool reserve schedule. Definite assignments of delivery are being arranged and the program is being adjusted to suit the effect of machinery deliveries. If you wait until emergency time to notify us that you need thirty thread grinders, or any other machines of such a specialty type, it's going to mean critical delays for the Government, yourself and others.

Mr. Martin:

Listen, I'm personally acquainted with the heads of three New England concerns building thread grinders and two more in the Middle West, and I can get deliveries out of those men when I want them.

Captain Hall:

Maybe so, but I happen to know that the two mid-Western firms have already notified the Ordnance office that the known emergency defense need of the Western districts alone for their product exceeds their capacity for fifteen months, and they can't take any sub-contracts from the Eastern district. I know that two of the Eastern builders are just as badly jammed. The other Eastern builder, when he was arranging his capacity, reported that he had allowed a contingency of twelve machines for you, because he expected that your order probably would come in rather late. But you can see what an upset your requirement of thirty machines would make.

Mr. Martin:

I can't conceive the necessity of all this rush that completely ties up an entire section of the industry.

Captain Hall:

We have tried to make it clear, Mr. Martin, that commercial industry will have to furnish probably 95% of

the special war materials for which no special manufacturing equipment now exists, or possibly will exist at a time of emergency. This means that everyone engaged in the program must in one to three months time make special fixtures, tools, and gauges, and get some additional machinery. Naturally, modern manufacturing processes, shortage of skilled help, and interchangeability, create an extra volume of gauge orders to be completed in a brief time. Therefore, we look to you to be prepared to meet such a demand. In a general way, that is what you promised to do in accepting the tentative schedule of our DPO.

Mr. Martin:

Well, that sounds reasonable. If everyone is after some article at the same time, there will be more confusion than there was in 1917, because after all we had two and a half years to get ready for that mess.

Captain Hall:

Now do you see why we want to get you organized on paper before an emergency comes?

Mr. Martin:

Let's look at some other ideas. I can see now that I promised to do something I could not possibly come through on and I wouldn't be able to help myself or get my friends to help either.

Captain Hall:

Here's another machine requirement. Internal thread milling machine, 30" swing. That's rather large size.

Mr. Collins:

Here are six more. You see, Mr. Martin, some of these thread gauges are larger than anything we have made since 1917. We haven't any steel for forgings in stock for anything as large as these.

Mr. Martin:

If those ring gauges are as large as that blue print stipulation shows, we haven't a quenching tank big enough to handle the heat treating.

Mr. Collins:

No, and not a furnace door or carburizing pot big enough either.

Captain Hall:

How many gauge grinder hands, Mr. Collins, would you say you'd need to train for this work?

Mr. Collins:

About 65, and they have to be skilled men.

Mr. Martin:

Where will you get 65 skilled men? You can't hire five a month off the street right now.

Captain Hall:

Well that's one more thing to investigate. It seems to me that only one-third of this order could be handled by your present facilities; and the especially difficult and critical part, that you said in your general statement you could handle, is beyond your capacity.

Mr. Martin:

It begins to look as though I've been a little bit careless. Got any suggestions?

(Continued on page 23)

NEWS FORUM

Holden Named Trustee of Glastonbury Knitting. Benedict M. Holden, Jr., Hartford attorney, was appointed late in June as trustee of the Glastonbury Knitting Mills by Judge Edwin S. Thomas in the United States District Court. The Court took action with the understanding that the present manager of the textile mill, E. A. Lucey of Manchester, will continue in that capacity to aid the trustee in reorganization under Section 77B of the Federal Bankruptcy Act.

The attorney stated that the first step in resuming operations for employment of 250 persons, to handle current orders of approximately \$200,000, will be efforts to negotiate a \$50,000 loan for working capital. According to figures of certified public accounts as shown by a recent audit authorized by the court, the assets of the company are \$463,130.82, current assets \$154,320.22 and current liabilities \$160,982.63.

Mr. Lucey told the court that there was approximately \$1,000,000 worth of business in sight for the next year, but that he doubted the possibility of the mill handling this amount of business under present conditions.

★ ★ ★

Noonan Upheld by Supreme Court. Compensation Commissioner Leo J. Noonan was recently upheld by the Supreme Court of Errors in two workmen's compensation cases involving conflicting medical testimony. One case was that of Martin Covaleski, of New Britain against the Russell & Erwin Division of the American Hardware Corporation, in which the court upheld the commissioner's finding that the claimant did not contract silicosis as a result of his employment by the defendant.

★ ★ ★

Employment High in Waterbury. Employment in Waterbury as of the first week in July, including WPA workers of which there are now approximately 1200, shows that approximately 32,200 are now working as compared with the 1929 peak of 35,000. These figures are based on a recent compilation gathered by the Waterbury Chamber of Commerce totaling 31,000 plus 1,200 WPA workers. Mr. Frank J. Green, secretary of the Chamber, stated that since employment figures for other months of 1935 were lower than the peak number of 35,000 for July, he thought that it was quite possible that the present number employed in the Waterbury area would practically equal that of the 1929 average.

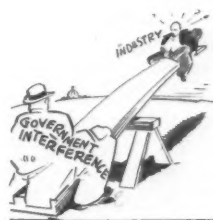
Judged from figures recently published by the State Emergency Relief Commission, Hartford has three times as many persons on relief and spends more than three

times as much as Waterbury; New Haven has nearly three times as many persons on relief and spends more than twice as much as Waterbury; while Bridgeport has about one-third more persons on relief and spends nearly twice as much. These facts, taken from the April welfare figures, seem to indicate that Waterbury has absorbed by reemployment more persons than any of the cities mentioned. **Ed. Note:** This means all branches of employment.

★ ★ ★

Pickering Deplores Federal Business Policy. Commander Nelson W. Pickering, president of Farrel-Birmingham Company, Ansonia, Conn., in collaboration with Allen W. Rucker, business economist of Boston, recently published an article, "Government Interference with the American Industrial System," which points out that neither higher wage rates, shorter working hours nor rising industrial prices are the formula for business recovery.

From official government data the authors reveal that governmental interference with factory wage rates creates a distortion between industrial and farm prices, and that



the decline of factory output below normal is almost exactly proportional to price distortion existing throughout the period 1921-1923 and 1929-1935. In a series of conclusions sharply correcting New Deal economists who seek to fix industry with the responsibility for unemployment, the authors show that:

"1. Industry has never failed, through improved machinery and methods, promptly to balance its costs and prices with the farm price level, until and unless interfered with by government—and that government interference is a major cause in both the intensity of depression and the slowness of recovery therefrom.

"2. The most prosperous periods in American industry are those in which the prices of manufactured goods, relative to the farm price index, are being reduced—and the

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reduction in prices is accompanied by increased employment, purchasing power and consumption.

"3. The periods of unemployment and underconsumption occur when the costs and prices of manufactured goods are rising relative to the farm price level—and the rise is accompanied by a decline in factory output, employment and purchasing power.

"4. Further reduction now in the industrial price level is obstructed by excessively high wage rates relative to farm prices—and an additional increase in hourly wage rates threatens further price distortion and consequent decline in industrial and business activity."

The authors also show that factory unemployment is largely traceable to the failure of some 69,000 manufacturers who could not keep going in the face of governmental interference. To remedy the situation, they call upon government for relief from interference in business, freedom to restore flexible wage rates and working hours, and education of labor to seek higher annual incomes through greater productivity instead of through higher wage rates.

★ ★ ★

New Departure Gives Watches to Veterans. Ninety-seven employees of the New Departure Manufacturing Company, all of whom have served the corporation for more than a quarter of a century, were recently given gold wrist watches. The presentations were made at a



dinner at the Endee Inn for 252 employees who have been with the company 20 years or more. In the group receiving watches were eight men who have been employed for more than 40 years while others with less than 25 years but with 20 or more years' service received service buttons.

★ ★ ★

Machinery Sales Retarded. Seasonal slackness and political uncertainty are given as reasons for seasonal slackness likely to modify the normal need for machinery replacement during July and August, according to the magazine, "American Machinist." The editors feel that should a swing toward Landon set in it would no doubt create a feeling of confidence that would be materially expressed

in an increase in orders, but otherwise the resumption of the upswing may not be expected until September.

New England found June business good, even better than May. In the New York district price increases are said to have contributed to the best months since 1929, while business in the Philadelphia and Hartford districts are said to be holding up well with no evidence of summer dullness.

★ ★ ★

Farrel Foundry Buys Property. The Waterbury Farrel Foundry and Machine Company of Waterbury has recently purchased the property on Benedict Street in that city formerly owned by the Tracy Bros., but more recently owned by the Waterbury Savings Bank since the Tracy Bros. went into receivership. On the property, which adjoins the Farrel Foundry, it is understood that a new factory building will be erected in the near future.

★ ★ ★

Farewell Given to John P. Coe. Employees of the Naugatuck Chemical Company honored John P. Coe, former general manager, who was recently transferred to the New York Division, at the annual outing of the Alembic Association, held Saturday, June 20, at Camps Irving and Pershing on the Housatonic River.

Mr. Coe, one of the organizers of the Association, was presented a plaque by Edward Reilly, industrial relations manager at the plant. Approximately 700 employees of the Naugatuck Chemical Company attended the outing.

★ ★ ★

Case, Lockwood Employees Pledge Loyalty. In recognition of the 100th anniversary of their company, 150 employees of the Case, Lockwood and Brainard Company, printers and bookbinders of Hartford, met with the officers and directors to present a specially printed testimonial resolution pledging continued loyalty. Representing these employees, whose total working service is more than 2000 years, Frank A. Brazel, shop superintendent, told of their appreciation of the treatment given by company officials through the years, and named Charles Mahl, who has a 68 year service record, to present the resolution, which read: "We, the employees of the Case, Lockwood and Brainard Company, on this the 100th anniversary of its founding, extend our hearty congratulations upon the past and our best wishes for the future. The wise, human and understanding leadership of this organization throughout its history, and particularly during these last trying years, makes us proud and happy in our association with it, and we pledge our loyalty throughout the years to come."

The resolution was graciously accepted by Newton C. Brainard, president, who stated that the success of the



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company had been due to loyalty of the employees. In behalf of the officials, he in turn presented service pins to all employees who had served ten or more years, each pin having a distinguished color for each decade of service. Eighty-two such pins were awarded.

★ ★ ★

Light Company to Rebuild for Flood Protection. In order to prevent future flood waters from interfering with electric service, directors of the Hartford Electric Light Company recently approved a large scale program of rebuilding and renovating. With the new improvements it will be necessary for flood waters to reach the 40 foot level before service will be interrupted.



The South Meadows plant, seriously injured during the recent flood, will be protected against water up to the 40-foot level, and all openings in the foundation of the building will be sealed to the height of a 37 foot level, and from a 37 foot water level to 40 foot, water-tight hatches will be constructed. The Pearl Street sub-station will be moved from a special location to the northwest corner of the quadrangle owned by the company in the rear of the company's downtown plant. It will also be erected above a water level of 40. feet. The Wethersfield sub-station will be moved to a site near the Silas Deane Highway at a point which it is thought will be above high water.

While exact cost of construction is not available at press time, it is believed that several hundred thousand dollars will be expended before the program is completed.

★ ★ ★

Folding Box to Increase Output. Unable to fill requirements of paperboard although working 24 hours a day, the National Folding Box Company of New Haven, it is understood, will expend some \$400,000 for new equipment and installation, according to a press announcement recently made by President H. S. Hinkle. The decision to expand has been brought about by the fact that the company has been unable to produce sufficient tonnage

recently and has found it necessary to purchase hundreds of tons from competitors.

It is anticipated that there will be an increase in the number of employees toward the latter part of the year, although at present no new personnel will be taken on. A contract has already been let for new equipment and its installation. A large part of the money will be spent in New Haven, with the exception of that going for special equipment, not manufactured in the city.

★ ★ ★

Niles, Bement Headquarters to be in Hartford. Removal of the Headquarters of the Niles-Bement-Pond Company from New York to Hartford, and the election of Clayton R. Burt, formerly head of Pratt and Whitney Company, Hartford, as president, was voted by directors of the former company at a recent meeting. At the same time the board voted a dividend of 50 cents a share on the common stock, the first since March 31, 1932, when 15 cents was paid, and reduced the board's membership from 12 to 7. Board members at present include: Col. Edward A. Deeds, chairman; Sydney Buckley of Philadelphia; Clayton R. Burt; Sandford E. Etherington, Charles K. Seymour, both of New York; Alexander S. Keller, Hartford; George H. Warrington, Cincinnati. Mr. Seymour, former president, will continue as a director and as treasurer of the company.

The Pratt and Whitney Company, formerly operated as a subsidiary of Niles-Bement-Pond, was recently merged into the latter concern. Complete removal of the office from New York to Hartford, according to Mr. Burt, is not expected until the first of the year.

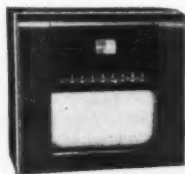
★ ★ ★

Bristol Company Adds New Line. The Bristol Company, manufacturers of control instruments of Waterbury, recently announced a new pneumatic-type controller for temperature, pressure and liquid level. Known as the model 90 controller, this instrument has been developed to satisfy the many requirements for automatic temperature and pressure control that do not warrant a short record of the control temperature of pressures, and for applications where recording instruments are already in use.

Small and compact and embodying the latest developments of automatic control, this controller has as its outstanding feature the same type of precision measuring elements as those employed in Bristol's Recording Instruments, where accuracy is of prime importance.

Equipped with a wide-range sensitivity adjustment which can be changed by the user from direct to reverse acting, or vice versa, without additional parts, this model 90 Controller is offered in two forms, both moisture, fume and dust-proof, for wall and for flush panel mounting.

PIONEERS IN PROCESS CONTROL SINCE 1889



IN THIS modern Bristol's Wide-Strip Potentiometer Pyrometer, good sound design prevails throughout.

Nothing has been skimmed. Nor has any detail been over-emphasized. Strength is found where strength is needed. Long life has been built into every part. Con-

struction has been so coordinated and balanced that lastingly accurate and trouble-free performance is assured.

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THE BRISTOL COMPANY, WATERBURY, CONNECTICUT

Erratum. Last month we erred in the spelling of a proper name in the News Forum Item titled, "T. A. D. Jones Adds Colburn to Staff." The name should have been C. M. Colberg.

Good Answer to "Machine Steals Jobs." Halfway thinkers, and they may be counted by the thousands, seem to hold to the belief that the installation of a machine which lets one man do the work of five means that four men join the bread-lines. A complete study of the government's own figures will prove the opposite. The facts show that machines instead of throwing men out of work, have actually increased employment as follows:

During the three decades ended in 1929, the United States went through the most rapid developments in its history in the application and invention of machines. And what was the result? The number of persons employed rose 88 per cent while the population increased only 62 per cent, mechanization increased 331 per cent and production rose 216 per cent.

The linotype machine was one that let a single man do the work of about five. It was introduced in the early 1890's. Yet in 1889 there were only 50,000 employed in the printing and publishing business as against 150,000 in 1929. That 150,000 does not include the thousands who got new jobs to supply paper, ink, and machines needed by the stimulated printing business.

Similar results are true of other inventions. While it is true that there have been periods of adjustment, when employment in a single industry was temporarily reduced, machines eventually create many more jobs in other industries than they displace in the one in which they are introduced.

Earnings Up for Connecticut Light and Power. For the 12 months ended June 30, 1936, Connecticut Light and Power earnings amount to \$3.29 a share as against \$3.19, with gross operating revenue placed at \$18,206,654, or an increase of 7.1 per cent over the \$16,996,010 for the 1934-35 period.

The net amount available for dividends and other corporate purposes is \$4,581,461, or an increase of 2 per cent over the same period a year ago.

Moore Completes 45 Years with Colt's. Frederick T. Moore, vice president, director and works manager of the Colt's Patent Fire Arms Mfg. Company, Hartford, completed 45 years of service with the company on July 15. Mr. Moore received many congratulations and gifts from his business associates, and high praise from President Samuel M. Stone who presented him with a 45 year service button. He also received from his associates a basket of 45 American Beauty Roses, presented by Arthur L. Ulrich, secretary of the company, who has completed 50 years with Colt's.

Mr. Moore entered the employ of Colt's on July 15, 1891, as an apprentice. He is recognized everywhere as an expert in machine gun development.

New Haven Men to Take Sea Trip. In order to demonstrate the availability of New Haven harbor to big ships, the New Haven Chamber of Commerce in cooperation with the service clubs of New Haven has scheduled a circle cruise on the Clyde-Mallory lines Iroquois, 12,500

tons (for New Haven business men), September 18-21. This ship is scheduled to leave Belle Dock Friday, September 18, and sail down the Sound to Hell Gate, New York Harbor and pass Sandy Hook to the Atlantic Ocean. There it will turn eastward sailing along Long Island, Rhode Island, Massachusetts and Maine Coast, passing Bar Harbor. On the return trip the Iroquois will cross Massachusetts Bay and pass through the Cape Cod Canal returning to New Haven on a route along the Rhode Island and Connecticut Coast. It is scheduled to dock on Monday morning, September 21 at 7 A. M.

Arnold B. Taylor, chairman of the New Haven Chamber of Commerce sub-committee of the Harbor Committee, states that the cruise is being planned in order to bring together a large number of people interested in the development of greater shipping activities at the port. He and others interested in the harbor development project believe that few persons are aware that a ship the size of the Iroquois, drawing 21 feet, can be accommodated in New Haven Harbor.

New Haven Copper Makes New Shingles. The New Haven Copper Company of Seymour, Conn., manufacturers of sheet copper since 1849, recently started the production of Kenmar Copper Shingles, a product which was patented in August, 1934, and first installed for test purposes in the company's own building in the Fall of



KENMAR Copper shingle roof on the Pelham Manor, N. Y., home of Edmund C. Gause, member of the accounting firm of Haskins & Sells.

1933. Except for a few test advertisements last Fall, the product was not advertised to the trade and consumers until the early part of 1936 when advertising was started in a number of National publications. At present there are a number of installations on the Pacific Coast, several in the Midwest states and the South and a much larger number throughout the New England and Atlantic states.

The advantages of this type of roof as pointed out in the company's advertising and sales literature include: 1. Longer life (time tested for centuries); 2. Increased saleability; 3. Increased fire protection; 4. Protection against lightning; 5. Economy because of light weight; 6. Outstanding weather type features; 7. Better protection for insulation; 8. Architecturally correct

for any type of construction; 9. Modern because of the general trend toward the use of more metals in building; 10. Distinctive because of its beauty, symbol of quality and the fact that it cannot be imitated; 11. Beautiful because of several other features mentioned and the fact that it grows more beautiful with age, coming in four colors—green "Patinated" (pre-aged), two rich browns and gray; 11. Lowest cost in the long run.

The accompanying illustration shows how the Kenmar Shingles appear on a high grade home. Mr. L. R. Clapp is vice president and general manager of the company.

New Construction. The contract for the erection of an addition to the Lux Clock Company plant in Waterbury has been awarded recently.

The Wallace Barnes Company of Bristol, manufacturers of springs, is now building a small addition to its rolling mill.

American Brass Company recently started construction of additions to its North End mill in Ansonia, which according to our information, will house a new shipping room and provide for extension of the extrusion rod department. It is understood that the company plans to consolidate the bar and bolt and brass mill rod departments with the extrusion rod department and eventually use the area now occupied by these departments as a copper mill.

Split Pea Design Aids R. Wallace. Unusual sales promotion efforts which encouraged jewelers to find a split pea in the design in a piece of silverware, were recently staged by R. Wallace and Sons Mfg. Co., Wallingford. A split pea was the signature-symbol used by Grinling Gibbons, early English wood carver and associate of Sir Christopher Wren, for whom the "Sir Christopher" Wallace pattern was named. To those who wrote Charles H. Gregory, sales promotion manager, telling the location of the symbol, a box of cigars was sent. After a short designated period, Mr. Gregory released the secret by explaining that the split pea appeared on the handle of the iced tea spoon in the "Sir Christopher" pattern.

Barton Stresses Public Relations. In a recent address before the Illinois Manufacturers' Association, Bruce Barton, one of the nation's leading advertising men, pointed out that the outstanding defect in the operation of American business was the woeful lack of appreciation and understanding of the value of "Public Affairs" as an adjunct to each private business. He reminded business men in no uncertain terms that they must set out to win the favor and gain the confidence of 130,000,000 by writing "Public Relations" at the top of the list, above production, finance, accounting and all other factors which go to make up their business life.

By this constructive, active approach, Mr. Barton enthusiastically proclaimed the present negative, complaining, inactive attitude of business generally, would be evaded. He pointed out that the problem of proper "Public Relations" should be solved by each business observing a few simple rules of conduct as follows:

1. Business must show itself more honest than politics.
2. Business must be more patriotic than politics.
3. Business must be more courageous than politics.
4. Business ought to be more patient than politics.
5. Business ought to be just as local as politics, in the contest for the confidence of the people.

SAFETY FUSE

(Continued from page 7)

call at the Whitehead homestead. The scenes were depicted by descendants of the principals on the original ground in the East Weatogue section. At the close of the pageant, a bronze tablet on Power Mill Brook, which marked the spot where the first factory operated, was unveiled. Mr. Robert Darling, vice chairman of the company's board of directors and H. E. Ellsworth, president of the company, spoke, while Miss Mary C. Eno, a granddaughter of Richard Bacon, one of the original partners, unveiled the tablet which bears the names of the original partners—Bacon, Bickford and Eales.

On Wednesday, May 27, guests were escorted on a tour of inspection through the plant by Robert E. Darling and John E. Ellsworth. The official reception was held in the afternoon together with a demonstration of fuse making in the basement of the office where fuse making equipment, photographs and actual fuse products from all over the world had been set up in exhibit form. In the evening from 8:30 to 11 p. m. there was a public reception for members of the fuse family, employees, friends and neighbors from Simsbury and surrounding towns. The estimated attendance was 2500 with over 1700 being received personally by officials of the company. Special features of the reception included the opening of the machinery exhibit, serving of refreshments and dancing to the tuneful melodies of a 25 piece band.

On Thursday evening, May 28, the company gave a dance for the employees at Eno Memorial Hall at which time service awards were given to officials and employees. Thirteen employees with 40 years' service received testimonial scrolls and buttons, 16 employees with 35 years' service received gold buttons and 55 employees with 25 years' or more service received silver buttons. In turn the employees presented to officials of the company a beautiful scroll with the names of each employee written in his own hand writing. In addition office employees gave the officials a beautiful guest register while the Avon and Simsbury factory groups presented them with four beautiful antique Egyptian hand made silver and copper ash trays. A centennial gift of \$25.00 was presented to each employee as a token of the high regard for loyalty and performance at the end of the first 100 years.

Among the prominent guests present at several Centennial functions were: H. J. Mitchell, president of Imperial Chemical Industries Ltd.; Col. G. E. Stanley Smith, recently retired chairman of Explosives Group Board of Imperial Chemical Industries; H. O. Smith, director; Leonard W. B. Smith of the Foreign Department—the last three being great-grandsons of William Bickford, the founder of the original fuse firm at Tuckermill Cornwall England in 1831.

From Imperial Chemical Industries came J. C. Bickford-Smith and W. N. Bickford-Smith, also great-grandsons of the original inventor of safety fuse, William Bickford, and other associates in the management of Bickford-Smith and Company, a division of Imperial Chemical Industries which is still making fuse in the original factory today. This group was accompanied by Michael Bickford-Smith, son of J. C. Bickford-Smith, also working in the family business, together with other staff members of Imperial Chemical Industries and their New York representative.

From France came Madame Robert Davey with her two sons, Reynard and Philippe, associated in the ownership and management of the French fuse firm of Davey, Bickford, Smith and Company at Rouen. Canada was represented by Arthur B. Purvis, president of Canadian Industries Ltd.; Winthrop Brainerd, vice president of Canadian Industries Limited; Harry R. Ardill, general manager of the Canadian Safety Fuse Company, all being accompanied by their wives.

From Mexico City came R. G. Erskine, president of Cia. Mexicana de Mecha Para Minas.

From the west came Mr. and Mrs. Walter J. Morris, the former being president of the National Fuse and Powder Company in Denver, Colorado; president and Mrs. Thomas W. Norris of the Coast Manufacturing and Supply Company of California; and treasurer Ralph E. Merritt of the same company accompanied by his wife and son.

LET US GUIDE RESTLESSNESS DOWN THE MIDDLE

(Continued from page 1)

a country in the world that excelled it in all those particulars.

"Such," said the Colonel, "were the effects of the no government he had just expatiated on."

While the do-nothing government apparently worked well for the good of the people of Colonial Connecticut, I should not recommend it now. Between the two lies the necessary freedom to use our restlessness and independent turn of mind to build constructively. Danger lurks on both sides of the road.

Let us guide restlessness down the middle, but let us not confuse the Royalist idea that lack of supreme power in the hands of one person constitutes a do-nothing government.

WHAT CONGRESS DID

(Continued from page 8)

Several bills were introduced providing for **Government Ownership of Railroads**. No action was taken on any of them. H. R. 4747, providing for the **Right of Appeal** from orders of the Interstate Commerce Commission, was not acted upon but will be re-introduced in the next Congress. (*For further reference see June and July issues of CONNECTICUT INDUSTRY and Transportation Bulletins No. 453, February 6, 1936, and No. 460, March 27, 1936.)

RESTRICTIONS ON TRADE

The new **Guffey Coal Bill***, framed after the first Guffey Coal Act had been declared unconstitutional, to establish a price fixing system for bituminous coal, failed of passage due to a last minute filibuster, but is expected to be re-introduced in the next session of Congress. Likewise the **Wheeler-Rayburn Federal Trade Commission bill***, expanding the power of the Commission over trade and industry functions, died in the House Interstate Commerce Committee, but with the assurance that it would be resurrected early next session. **The Food and Drug Act Amendments*** died in conference because of differing opinions on jurisdiction as between the Agriculture Department and the Federal Trade Commission. **The**

O'Mahoney Federal Licensing Bill* which would have required federal licensing of all business engaging in interstate commerce, lost out with the foregoing largely because of the strong opposition of organized business. **The Patman-Robinson Price Discrimination Act***, designed to prevent price discrimination as between large and small buyers, is expected to be the most troublesome of all acts in restraint of trade passed by Congress in recent years. So vague in its terms that the best legal talent feels uncertain as to many of its workings and yet so stiff in its penalties for non-compliance, this Act is certain to flood the courts with border line cases. Final text of the act was sent to members June 20, and a 7 page analysis has since been made available for members requesting it, as mentioned in General Bulletin 482, dated July 3. **The Commodity Exchange Act*** which amended the Grain Futures Act was approved June 3. It sets up a Commodity Exchange Commission with discretionary control over dealings in wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs and Irish potatoes. **The Cotton-Tobacco-Potato Repeal Act** repealed the Bankhead Cotton Act of 1934 as amended; the **Kerr-Smith Tobacco Act** of 1934 and the **Potato Act** of 1935 since all three were auxiliaries to the AAA of 1933, since voided by the Supreme Court. (*For further reference see February, March, April, May, June and July issues of CONNECTICUT INDUSTRY, and General Bulletins No. 445, January 20, 1936; No. 448, January 27, 1936; No. 453, February 14, 1936; No. 467, April 15, 1936; No. 480, June 22, 1936; and No. 482, July 3, 1936.)

MISCELLANEOUS

Provision was made for initiating a **broad and quasi-political investigation** into alleged violation of civil liberties, the snooping expedition to be carried out with \$15,000 and possible borrowed legal talent by the subcommittee of the Senate Committee on Education and Labor, including Senator La Follette, chairman, and Senators Murphy of Iowa and Thomas of Utah. A large number of **stream pollution bills*** including those by Senators Loneragan and Barkley which would have given the Federal government practically absolute control of every river and stream in the nation, failed of passage due to pressure of other legislation and opposition by industry. Several of them will be introduced in the next Congress as further threats to "states' rights." **The Citron Flood Compact Act**, approved June 8, 1936, gives the consent of Congress to the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, West Virginia, Kentucky, Ohio, Indiana, Illinois and Tennessee to negotiate and enter into agreements among themselves for flood prevention. To replace the **outlawed AAA the Soil Conservation Act**, approved Feb. 29, provided for conservation and improvement of soil resources, maintenance of farm income, etc., authorizing an appropriation up to \$500,000,000 to enable the Secretary of Agriculture to carry out the terms of the Act. **The Federal Aid Highway Act** extends Hayden-Cartright Highway Act for two years and authorizes appropriation of \$125,000,000 annually for two years, these amounts to be matched by the states for building of highways. The **Neutrality Act** of August 31, 1935, was amended and extended to May 1, 1937. (*For further reference see March and April issues of CONNECTICUT INDUSTRY and General Bulletin No. 455, February 24, 1936.)

DEPARTMENTS

Accounting Hints for Management

Contributed by Hartford Chapter N. A. C. A.

Social Security Taxes as Part of Costs. Assuming that the law will stand the final test as to constitutionality, there can be very little doubt but that the social security taxes imposed upon the employer must be regarded as additional costs of doing business. From inquiries received it is evident that many concerns are at a loss how to handle this on their books. It is thought that the following suggestions may be helpful.

The tax will not be payable until 1937, but it is highly desirable to record this accruing obligation during the year especially as the amounts are definitely computable. While it may be calculated on a monthly basis and credited to a Reserve Account, in some instances it may be found more expedient to have the accruals conform to the completed payroll weeks within the month.

When making the periodical credits to a "Reserve for Payroll Taxes" it should not be looked upon merely as a "bookkeeping entry." Such credit is the definite recording of a liability, and furthermore to a very powerful creditor, none other than the Federal Government. Therefore it behooves the manufacturer to make suitable provision to set aside sufficient cash or funds to remit these taxes payable in 1937. This will become even more imperative in succeeding years when other phases of these taxes become operative, for then by making stipulated deductions from the employees' income the employer virtually becomes an involuntary tax collector for the Federal Government.

If *Standard Costs* are in use it will be a fairly simple matter to provide for this added expense by increasing the standard labor content of such costs by 1% or 2%, etc.—that is, the employer's portion of such taxes.

Where the plant is operated on *Job Costs*, theoretically the cost of each job should be charged with its proportion of this tax based upon the direct labor represented therein. The part of the tax applicable to indirect labor will be reflected in the "Overhead Burden" application. Practically, this procedure would involve a tremendous amount of additional clerical work. No doubt the accounting equipment manufacturers will devise machines which will handle such additional work in situations where it is deemed advisable to handle it in this manner. It would seem as a general thing however, that this item could be charged to Departmental Overhead Accounts, and thus be absorbed into costs on whatever basis other overhead is applied. Care must be taken to see that it does not operate as an injustice to certain departments or lines or product.

These remarks really apply primarily to Factory Labor Costs. But the payroll tax also applies to the commission or salaries paid to salesmen, officers and administrative staff. When the accrual is made for this portion of the tax it should be charged to the same section of the classification of accounts that the commissions or wages are charged to. Whatever disposition, absorption or allocation is usually made of such salaries should then be applied to this new element of expense.

Transportation

Association Represented at Classification Hearing. Norris W. Ford, traffic manager of the Association, attended the classification hearing held at Spring Lake, New Jersey, July 14, in support of an application of interest to hardware manufacturers of the state. The application proposed to reduce the carload rating on copper, brass or bronze hardware in carloads in Official Classification from Rule 26 to fourth class.

Southwestern Rates Again Postponed. In accordance with a recent order issued by the Interstate Commerce Commission, the effective date of the revised class rates between stations in official territory, including New England, and stations in the southwest, including Arkansas, Oklahoma, Texas, and that portion of Louisiana west of the Mississippi River, has been postponed from August 8, 1936, to February 8, 1937. These revised rates apply via the all-rail route as well as via the ocean-rail, rail-ocean, and rail-ocean-rail routes.

Previously the effective date of the rates had been postponed from May 5 to August 8, 1936.

American-Hawaiian Shows Profit. Coincident with reporting a net profit of \$648,682 for the first five months of 1936, and supplementing personnel changes to provide for expansion of its south Atlantic service, the American-Hawaiian Steamship Company, pioneering intercoastal carrier, recently announced it had taken delivery of four steamers purchased from the Dollar Line, which will be renamed after reconditioning—The Alabaman, Arkansan, Carolinian and Floridian. It is anticipated that these new ships will go into service around August 1. New services now being worked out for introduction after the ships are commissioned, will shortly be made public, according to a statement by Thomas G. Plant, vice president of the American-Hawaiian Steamship Company.

New Haven Shows Big Passenger Traffic Increase Over Fourth. Passenger traffic over the New Haven Railroad during the three day Fourth of July holiday (Friday until Monday), has been reported as twice that of any previous Fourth since 1915, and excluding the number of passengers carried on commutation and similar low fare travel, the passenger traffic increased 56 per cent in numbers during the month of June compared with June, 1935.

Although traffic increased, trustees of the New Haven Road have announced that passenger revenues increased only 1.4 per cent over a year ago as compared with an increase of 10.2 per cent in May over the same period in 1935, which shows a sharp retardation of the previous rising monthly revenue from passenger traffic, since the introduction of the 2 cent fare. Available information for June also shows a shift from multiple trip and zone tickets to regular coach tickets due to the new coach fares being lower in many cases.

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Association Efforts Bear Fruits in Subsidy Act. Efforts of the Association to have included in the Ship Subsidy Bill, a provision to stop discrimination by steamship companies against sub-ports, bore fruit, since the amendment suggested was included in the bill as finally passed in the closing days of the last Congress. In its efforts the Association received the assistance of many interested manufacturers in the Bridgeport, New Haven and New London areas.

The provision applies to every common-carrier ocean-going vessel touching the shores of the United States, irrespective of the conference it is in, the trade it plies, or whether its ownership is foreign or domestic. It reads as follows:

"Without limiting the power and authority otherwise vested in the Commission, it shall be unlawful for any common carrier by water, either directly or indirectly, through the medium of an agreement, conference, association, understanding, or otherwise, to prevent or attempt to prevent any other such carrier from serving any port designed for the accommodation of ocean-going vessels located on any improvement project authorized by the Congress or through it by any other agency of the Federal Government, lying within the limits of the United States, at the same rates which it charges at the nearest port already regularly served by it."

While the Intercoastal Shipping Act of 1933 already carried a similar amendment, it was felt that the Association should make an effort to strengthen its position by attempting to have a similar requirement inserted in the Subsidy Bill, because Secretary Roper had previously indicated his desire for the repeal of this provision.

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Phoenix Buys Interest in Consolidated Lines. The purchase of substantial interest in the Consolidated Motor Lines of Hartford, Conn., one of the large operators of motor trucks in the East, was recently announced by the buyer, the Phoenix Securities Corp. of New York. It is understood that plans are now being developed to extend the service beyond the territory which Consolidated now serves (Boston, Worcester, Springfield, Pittsfield, Bridgeport, New Haven, Hartford, New Britain, Providence, New York City, Albany and Newark), and that an application will soon be made to the Interstate Commerce Commission for authority to enter into other new fields, within the thickly populated eastern states.

Under the guidance of President Joseph Arbour and his son Everett J. Arbour, general manager and treasurer, Consolidated has grown from a horse and wagon in 1907 to one of the largest trucking companies in America, now operating some 300 trucks and employing over 500 persons. The volume of freight handled now is said to be over 15,000,000 pounds per week and the payroll over \$1,000,000 annually.

★ ★ ★

Keeshin Seeks Permission to Acquire Seaboard. The Keeshin-Transcontinental Freight Lines Inc., Wilmington, Delaware, applied on July 1 to the Interstate Commerce Commission for authority to issue 6,000 shares of no-par stock with which to acquire the Seaboard Freight Lines Inc., a Connecticut concern with terminals in key New England cities.

Under an option agreement the stock will be sold to Lehman Brothers of New York at \$100 a share, the Keeshin application stated. Of the aggregate \$600,000 expected

to be realized from sale of the stock, about \$350,000 would be necessary to acquire the Seaboard Lines, the remainder to be used for general corporate purposes.

Foreign Trade

Australia Loses Tariff Concessions. Effective August 1, Australia was removed from the list of nations receiving tariff concessions granted by the United States in various reciprocal trade treaties negotiated under the Trade Agreements Act of 1934. The action came as a result of instructions received by the customs collectors in Australia to refuse imports from the United States of all goods on the licensed list, (with the exception of chassis and typewriters for which special treatment is reserved) unless applications are accompanied by proof that the goods are unprocurable except at greatly increased cost from countries with which the balance of trade is in Australia's favor. Germany is at present the only other nation which has lost the right of tariff concessions.

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Countervailing Duties Levied on Certain German Imports. Because German manufacturers have received bounties for the export of certain commodities, official notice has been given that, pursuant to Section 303 of the Tariff Act of 1930, countervailing import duties equal to the bounties will be collected on certain articles when imported directly or indirectly from Germany after July 15. Pending the determination of the total amount of the bounties, the liquidation of all entries covering merchandise of this nature will be suspended, and a deposit of the estimated countervailing duties will be required at the time of entry in equal amounts to the percentage of the invoice value stated on articles as follows:

Cameras 45%; china tableware 22½%; cotton and rayon gloves 39%; leather gloves 47%; surgical instruments 56%; calf and kid leather 25%; glass tree ornaments 52%; metal-covered paper 48%; thumb tacks 31%; toys, dolls and toy figures 45%.

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South Africa Increases Rubber Imports. According to a recent report of the Commerce Department originating with the American commercial attaché at Johannesburg, South Africa, imports of unmanufactured rubber into South Africa have registered a striking increase during the past four years. Further increases of substantial proportions are anticipated as a result of the inauguration of tire manufacture in the country and the increasing local demand for hose and rubber mechanical goods.

The Dutch East Indies and the Straits Settlements are the principal countries of origin of the crude rubber now being imported into South Africa. Considerable quantities, the report states, are also being received from the United States, mainly in the form of material for re-treading tires.

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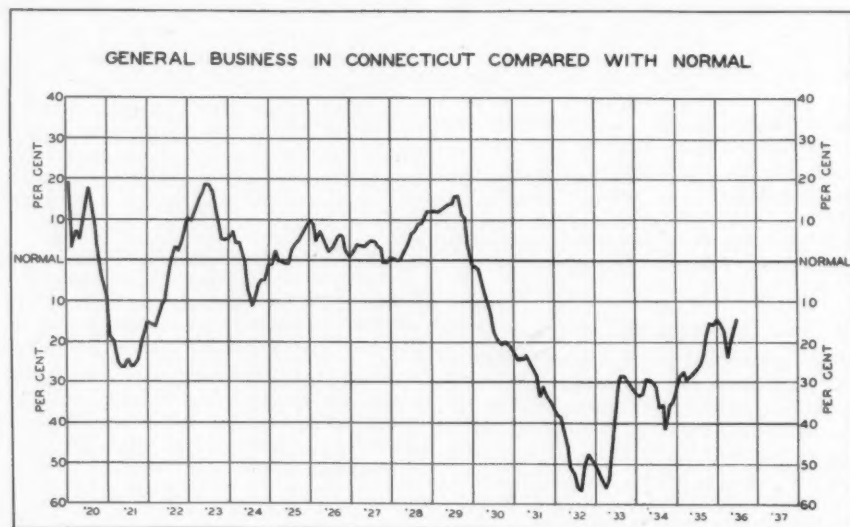
U. S. Paper Exports Increase. Exports of paper and paper products from the United States have registered appreciable improvement during the first four months of 1936, as compared with the corresponding period of 1935, according to figures compiled by the Commerce Department's Forest Products Division. During the period \$9,265,788 worth of paper products were exported compared with \$8,360,096 in the corresponding 1935 period, or an increase of approximately 10 per cent.

BUSINESS PATTERN

General Summary. During June, general business activity in Connecticut advanced sharply for the third consecutive month, the composite business index advancing to 14.5% below normal compared with 17.4% below (revised) in May. The June level was equal to that prevailing last December and with that exception the highest in exactly six years. Operations in manufacturing plants not only failed to show any seasonal recession from May but actually expanded further. The number of man-hours worked in seven cities increased 2% over the previous month and 17% over June, 1935. Factory employment was up more than one per cent over May and 5% over a year earlier. Consumption of raw cotton rose sharply during a period when the usual seasonal movement is down-

shrinkage from June. Steel manufacturers have also benefited by the additional orders for steel for the 1936 models. Other sources of demand for steel—machine tools, railroad equipment, tin plate and structural steel—have helped maintain early July operations at close to the previous month's average. Present reports indicate that buying in anticipation of higher steel prices or possible labor trouble has been a comparatively small factor and no decline in output of any consequence is expected this month. The weekly index of business activity increased sharply in the first half of July, the average for that period being some three points higher than in June.

Wholesale commodity prices advanced rapidly during the four weeks ended July 7 due primarily to the drought



ward. Sales in this industry have been exceptionally heavy during the past several weeks partly in response to advancing quotations for raw cotton. Freight carloadings originating in Connecticut for June reversed the downward trend of the preceding three months and on an adjusted basis were higher than for any month since February. Metal tonnage carried by the New Haven Road remained at approximately the May level. Building construction in progress made a further gain and now stands about 50% below normal. So far in July, the general trend is apparently still upward. Freight carloadings have experienced a substantial contraseasonal advance over June and manufacturing employment in one industrial city has continued to rise.

General business activity in the United States in June showed the same advance over May as occurred in Connecticut. Output of iron and steel, adjusted for seasonal variation, increased sharply and electric power production was also higher. Freight carloadings eased slightly from May and automobile output decreased seasonally. Demand for automobiles has remained at a high level with the result that production in July is showing only a small

in the northern plain states. The price of farm products increased 9% and food products 5% during that period. Textile products, because of a rise in the price of cotton, increased 2% and metals and metal products advanced the same amount. Of significance in the rise in metals has been the recent upswing in steel scrap following several months of sharp declines. Fluctuations in the price of this item, reflecting changes in demand, often indicate in advance changes in general business activity.

Retail prices, as measured by the cost of living index also mounted rapidly in June. The total cost of living, due to a 5% increase in food costs, was 2% above May. Compared with a year ago, food prices rose 6%, rent 11%, and the composite index 4%.

Financial. During the four weeks ended July 4, the number of failures in Connecticut and the gross liabilities of failures shrank to abnormally low levels and were well below the same period of 1935. New corporations formed and the aggregate value of capital stock rose 29% and 34%, respectively, over the corresponding period last year. Real estate activity showed further improvement and was a

third higher than a year ago. The value of mortgage loans also experienced a marked rise. Bank debits to individual accounts in four cities in the four weeks ended July 8 were 17% above the corresponding 1935 period.

Construction. Activity in the construction field continued to expand during June and early July, the value of building permits issued running 73% ahead of 12 months earlier. During the first half of 1936, the total floor space of building contracts awarded in Connecticut more than doubled the total for the first half of 1935; new residential building was about 80% higher. Since June 15, contracts have been awarded for additions to the plants of the following companies: Electrolux Company, Stamford, 45,000 square feet; Schick Dry Shave Corporation, Stamford, 25,000 square feet; Holo-Krome Screw Corporation, West Hartford, 20,000 square feet; Landers, Frary and Clark, New Britain, 82,000 square feet. In addition, the contract was awarded on June 18 for the construction of ten apartment buildings in Stamford, a slum clearance project, to house 167 families at a total cost of \$800,000.

In the United States, new construction, seasonally adjusted, was moderately below May but approximately equal to the average of the four preceding months. Residential building, however, increased to the highest point since June, 1931.

Labor and Industry. As mentioned above, manufacturing activity in Connecticut showed a pronounced increase in June. The adjusted index of the number of man-hours worked stood at 9.7% below the estimated normal against -12.1% (revised) in May. The index of factory employment advanced to -3.6% against -6.1% (revised) in the earlier month. Average weekly earnings per employee were 6% above, 1935. The May to June improvement took place generally except in New Britain where a slight decrease occurred. In Bristol, Hartford, Meriden and New Haven, the increases over May were small but contrary to the usual seasonal tendency. In Bridgeport, the number of man-hours worked rose sharply above a month earlier. Factory employment in Waterbury brass plants increased moderately during the month and was 13% above June, 1935. In Stamford and Torrington factories, employment also improved and showed gains of 17% and 10%, respectively, over the same 1935 month.

THE AMERICAN METHOD

(Continued from page 12)

Captain Hall:

Yes, for a starter, why don't you come over with me tomorrow morning to the Leland plant? I'm going to be there at ten to review their emergency plan on revolvers. The company has one of the most complete emergency plans in the whole country. Bring Mr. Collins along if you like. I'll look for you there. Good night! (Door slams.)

Mr. Martin:

Well, Collins, it looks as though I got caught that time. Even if we never have another war, I have a hunch that this factory plan will disclose some things we ought to know anyway. Let me know how many men you'll need to finish work on them up-to-date, and I'll sign the appropriation. I'll see you over at Leland's at ten tomorrow morning. I'm glad it's a place like Leland's we're going. I worked there thirty years ago as a young fellow. I can understand their language and maybe we'll get something out of it for our own problems.

Announcer:

The scene shifts to a special office in the Leland Arms Works which has been set aside for the exclusive use of their emergency planning committee, for meetings, and for the filing of confidential data regarding emergency work. Two large wall maps show the current arrangement of factory buildings and departments and the proposed re-arrangement in time of emergency production. Present are Mr. Leland, head of the arms concern; his ordnance representative, Mr. Mills; Captain Hall, the ordnance officer; Mr. Martin and Mr. Collins. Mr. Leland opens the meeting. As the scene opens, the conference for the annual review of Emergency Planning is just winding up, after showing practically 100% completion.

Mr. Martin:

This has certainly been an education to me. I don't think I ever saw this form called "Analysis of Progress of Factory Planning." It seems to be a pretty thorough outline of the steps I must take in completing our work. If you take this thing so seriously, with this conference room, your filing vault for all this confidential data and blueprints, your bound volumes of operation lists, your machinery, tool and equipment card files, your time study data sheets, departmental layout, your copies of sub-procurement schedules for materials, equipment and machinery, I reckon we ought to arrange our inspection gauge contracts likewise. We'll get busy and advise the Ordnance office what part of the gauge contract must be made with equipment we do not now possess, and adjust that part of the plan to suit. Perhaps we'd better organize a committee to handle these 26 sections, too. And, Captain Hall, your next visit will probably be more satisfactory to both of us.

Announcer:

Thus we get a brief glimpse of the American Method of Preparedness. It is no burden to the taxpayers, although it is of incalculable value. It does not create vast politically dangerous bodies of armed men, and the resulting suspicion abroad. It will save time, lives and property in case of another war. By it we can devote 95% of our energies to peaceful commercial pursuits with a full assurance that if attacked we can re-organize quickly around a certain plan that will guarantee the success of our arms at the least possible expenditure of lives and money, the least interruption to civilian activities, and the quickest possible reversion to peace-time pursuits after the termination of hostilities.

WARREN M. BROWN
CERTIFIED PUBLIC ACCOUNTANT

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Service Section

On account of space limitations, the material and used equipment items offered for sale by Association members have not been classified by sizes or usage best adapted. Full information will be given on receipt of inquiry. Listing service free to member concerns. All items offered subject to prior sale.

materials for sale

CONDULETS and fittings, remnants of covering materials—velours, velvets, mohair, tapestries, denims, chintzes, and cretonnes, semi-finished and cast-iron; U. S. S. nuts, pulleys, flat and crown face-steel and cast-iron; new shaft hangers, brass wire, brass rods, aluminum tubing, cold drawn steel—mostly hex; miscellaneous lot of material used in the manufacture of molded rubber parts and flooring, knife switches—new and many sizes; carload C. I. drop bases; lead pipe, lead sheet, acid proof pipe fittings, 124 bars screw stock varying thicknesses and lengths, white absorbent tissue process from cotton, rotary converter, colors and dyes—large anneal copper with high silver content in rolls J. H. Williams' wrenches variety, lacquers—several hundred gallons in assorted colors; and soft in assorted sizes.

equipment for sale

ACCUMULATORS, annunciators, baskets, beaders, beamers, bearings, belt stretchers, blowers, boilers, braiders, bronze runners, cans, cards, woolen; car loaders, chain, chairs, chamfer, clocks, time recorders; clock systems, colors and dyes, compressors, condulets, converters, conveyors, cookers, cooking utensils, doublers, draftsman's table, drop hammers, drops, board; drums, drying racks, dyes, engines, evaporators, extractors or percolators, fans, filtering carbon, folders, forming rolls, frames, furnaces, gears, generators, grinders, grindstones, grinding wheels, guiders, headers, lamp shades, lathes, lifters, looms, De Laski circular; machines, automatic; machines, calculating; machines, compressing; machines, dieing; machines, drilling; machines, filing; machines, filling; machines, folding; machines, knitting; machines, mercerizing; machines, milling; machines, pipe-cutting and threading; machines, pleating down; machines, riveting; machines, screw; machines, threading; machines, tongue and groove; machines, washing; mercerizer equipment; millers, mixers, mills, mills rubber; mixing rolls, motors, oil circuits; oven drawers, paints and lacquers; panels, planers, plungers, pointers, presses, profilers, pulley drives, pumps, reamers, receivers, rheostats, safe cabinets, saws, scales, screens, seamers, shapers, shears, spindles, spinning mules, steam tables, steam warmers, stitcher, 192 monitor corner box switches, tables, tanks, toilet equipment, trucks, ash can; tube closers; wire, wire screw and yarders.

for sale or rent

FOR SALE. One No. 94 Monarch Oil Burning Furnace, 2,000 lbs. capacity, complete with all accessories including electrical equipment. Address S. E. 90.

FOR RENT. In Hartford, Connecticut, units of 5,000 to 16,000 sq. ft. in fully sprinklered modern building suitable for light or heavy manufacturing. Elevator, heat, watchman service included in rental. New York, New Haven and Hartford Railroad siding available. Out of flood area. Will rent at reasonable rates. For particulars apply to Billings and Spencer Company, Nelson Smith, 75 Pearl Street, Hartford, or your own broker.

FOR SALE. Empty casks by car load or truck load. Size approximately 40" long 34" diameter. $\frac{7}{8}$ " staves and 1" heads. One head removed but included together with the hoops in the cask. Suitable for repacking any heavy material up to 2,000 lbs. Price very reasonable depending on quantity. The Geo. A. Shepard & Sons Co., Bethel, Connecticut.

FOR SALE. Ideal water-front property with dock and railroad spur on Quinnipiac River, New Haven. Location excellent for erection of bulk oil or gasoline storage plant, or for manufacturer desiring direct outlet and inlet for water-borne tonnage. Address S. E. 92.

FOR SALE. Bliss Gang Press in good condition. 100" between up-rights. Equipped with punches and dies. Can be seen in operation. For sale very reasonable. Waterbury Mattress Company, Benedict and West Clay Streets, Waterbury, Connecticut.

PATENTS FOR SALE. Patents are offered for sale or on a royalty basis as follows: A unique bridge score pad holder made of metal which will easily swing out of the way of players; keyhole guard to prevent removal of key from lock casing; transparent spherical puzzle especially unique in design and entirely new in conception—a good 5 & 10, or gift shop item if made on a quality basis. Full details will be furnished on request by addressing CONNECTICUT INDUSTRY, S. E. 93.

wanted to buy

NEW PRODUCTS WANTED. A well equipped established Connecticut manufacturer wants to acquire additional lines of metal products or tools having a normal manufacturing season during the summer and early Fall months. Would prefer an established line that can be distributed through the hardware trade. Address your offerings to S. E. 89.

employment

COST AND FACTORY ACCOUNTANT. Young man, age 29, High School and Business College education seeks position as accountant. His experience has been in cost and general factory accounting. Desires position with CPA firm or manufacturing establishment in Connecticut or New England. Address P. W. 323.

COST ACCOUNTANT. Age 28, High School and College. Eight years' experience production and payroll work. Available at once. Operates Comptometer. References. Address P. W. 325.

EXECUTIVE. Man with very broad executive experience qualified to fill position as manager, treasurer or accounting manager seeks a connection in Connecticut or New England. References exchanged during interview. Salary demands moderate and consistent with opportunity afforded. Address P. W. 327.

ESTIMATOR. Position as estimator on tool and production costs, analyzing manufacturing operations and planning new production. Twenty-five years experience including metal stamping and screw machine products. Ten years as a tool and diemaker, fifteen on engineering, designing, checking, drawings and supervising. Present position, 2½ years, planning and estimating. Address P. W. 328.

MANAGER OR SALES MANAGER AVAILABLE. Has had unusually wide experience in advertising, sales management, manufacturing and general management. Has held important positions in middle west and New York. Qualified for best type of constructive merchandising. Now residing in Connecticut, desires connection with New England concern. Salary commensurate with results. Highest credentials as to character and ability. For interview address P. W. 330.

ENGINEER, ACCOUNTANT, PRODUCTION. Married man under 40, with unusually broad background of experience in such positions as production manager, industrial engineer and accountant, including cost accounting, desires to locate permanently with a manufacturing organization where his combined accounting and production knowledge can be utilized to the best advantage. He would be especially valuable to a metal working establishment or any company in the brass industry desiring to increase its production efficiency making it tie-in with proper accounting procedure. For interview appointment, address P. W. 331.

ACCOUNTANT, OFFICE MANAGER. Can furnish A-1 references. Experience, several years' assistant to comptroller of a large corporation. Thorough knowledge of office management, accounting and financial statements. Working knowledge of costs. Address P. W. 332.

STATISTICAL AND SALES PROMOTION EXECUTIVE. Dartmouth graduate with 9 years' experience with large Connecticut corporation as chief statistician and market researcher, and more than 10 years' experience in accounting, sales promotion and publicity work, desires connection along the lines of his experience with a Connecticut or New England concern. Because of his broad knowledge of business he is able to handle a variety of assignments to the advantage of an employer. For references and interview address P. W. 333.

SALES REPRESENTATIVE—PROMOTION. Man with pleasing personality, who has had 12 years' experience as a successful sales representative for two Connecticut corporations traveling in 37 states, Canada and Cuba, and who has had several years' additional experience as purchasing agent and in industrial relations, desires to make connection in a sales or industrial relations capacity with a progressive concern anywhere in the U. S. His military and business experience in combination should make his services a valuable asset within the branches of work mentioned. Address P. W. 334.

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TESTING

BEFORE you go ahead with the production of any new product, research and testing logically precede as the "fixed routine."

IT IS just as logical and of equal importance to "test your sales message" in a good test territory before applying it, perhaps at great loss, to arouse sales enthusiasm in the national market.

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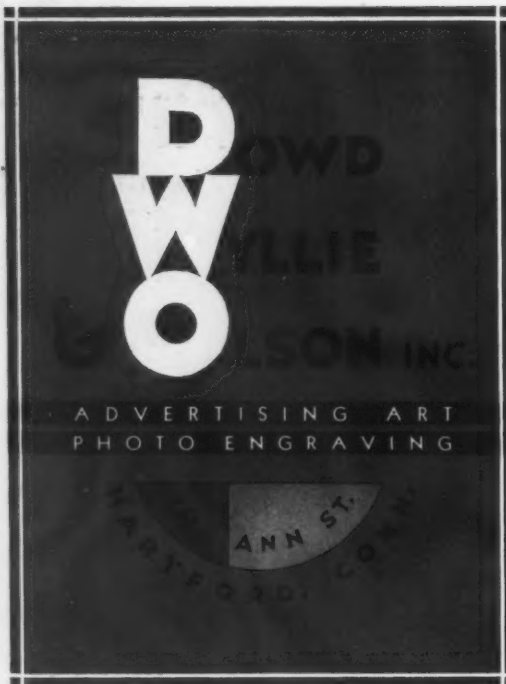
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